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RIVERSIDE TEXTBOOKS
IN EDUCATION

EDITED BY ELLWOOD P. CUBBERLEY

DEAN OF THE SCHOOL OF EDUCATION
LELAND STANFORD JUNIOR UNIVERSITY

THE BEGINNING TEACHER

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HOUGHTON MIFFLIN COMPANY

BOSTON · NEW YORK · CHICAGO · DALLAS

SAN FRANCISCO

The Riverside Press Cambridge

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The Riverside Press
CAMBRIDGE · MASSACHUSETTS
PRINTED IN THE U.S.A.

EDITOR'S INTRODUCTION

HELPING the beginner to start properly in any new work is a task that every occupation and profession has to undertake. In many ways the undertaking is easier in teaching than in the more competitive professions, owing to the fact that the teacher begins with a definite status and pay, is assigned a very definite piece of work to do, and, in our larger schools at least, is provided with some form of guiding supervision. More than that, the content of the instruction to be given and the important techniques of the teaching art have been formulated for her with some care. On the other hand, teaching is a subtle and psychological, rather than material, process, and it is not surprising that the beginner experiences, in consequence, many difficulties during the first few years of her work.

Owing to the very large number of beginners who each year enter on the work of teaching the call for help is a very imperative one. It is also a very pronounced one because of the lack of adequate professional training on the part of so many of the beginners, and in part, also, because of the absence of close professional supervision for those who teach in our rural and village schools. These points, however, define the problem only in the large. If the number of beginners were much smaller, if all of them had standard professional preparation before beginning their work, and if professional supervision were general the problem would still exist — though naturally in modified form — for the reason that the final making of a teacher must after all take place in the classroom and under actual schoolroom conditions.

The beginning teacher, then, regardless of her preparation, is in need of advice, guidance, and help in organizing and managing and teaching her school. Nor is this need confined to the first year alone, though naturally less help is called for each succeeding year. First there is need of sound advice as to personal equipment, as to securing the position, and as to entering on the duties of the school. Then there is need for practical guidance in organizing the school and in managing and controlling it. Mastery of these management functions is very important, since success here, or the lack of it often makes or mars the work of the teacher in the community. Still more the beginning teacher needs help that will enable her to make a respectable start in teaching the different subjects of the school course of study, as well as numerous practical suggestions that will enable her to put some originality into what she does. Finally, the teacher of to-day needs direction as to how to handle her community relationships, direct the social activities of her school, and carry through skillfully the special occasions and programs that she must organize and direct.

In our larger teacher-training institutions this help is given through the medium of a number of professional courses and in the practice school; there are numerous books, also, which cover these different phases of the teacher's work. There must be some provision made, however, for the teacher who has not been able to attend such an institution and consequently lacks this training. The authors of the present volume have tried to meet the needs of the many such beginners by providing, in one volume, just the varied help that they may require. They have combined here the important elements of the material that it usually requires two or three textbooks to present, and have produced, in compact form, a very helpful and practical book that can hardly fail of large usefulness, either as a classroom text or as a personal reading

book, not only to the teacher who is a beginner, but also to any teacher who has not as yet obtained that command of her powers which will enable her to organize, control, and teach a school with ease.

ELLWOOD P. CUBBERLEY

PREFACE

This volume is designed to serve as a textbook in teacher-training courses in high schools and normal schools and to supply material for use in teachers' state reading circles. The content is extensive enough for a year's course in management and teaching methods in high schools and for a semester course in normal schools. By supplementing the text with the selected references given at the end of each chapter, two courses, one in methods and one in management, can be supplied if desired. The combination of subjects treated in this volume also provides suitable content for a course, in the field known as "Introduction to Teaching," if it is desired to approach teaching from the point of view of management and methods. As a reading circle adoption, it will best serve teachers who are just entering upon their teaching careers or those who have had only one or two years of teaching experience.

The content and the arrangement of the book have grown out of three fairly firm convictions on the part of the authors. First, they believe beginners need a text which will present, in a unified form, the chief elements in the whole teaching function, namely: (1) management, and (2) technique. Second, they believe that the beginner should have command of a relatively simple, but at the same time direct and definite plan of procedure. Third, they believe beginners should have training in applying basic principles of organization, management, and method to actual schoolroom situations. As an illustration of the last, the laws of learning are stated, explained, and given general application in Chapter XI; their specific application, however, is a feature of every section where the learning process is involved.

Provision has been made throughout the text for review, discussion, projects, reports, and demonstrations to an extent that should offer good training for teachers. The number of references has been purposely limited to those which are most in accord with the needs, interests, and abilities of beginners and those which are usually available in the smaller libraries.

Although many innovations are not to be expected in an elementary teaching textbook, a few features of the present volume are new. Among these may be mentioned the materials dealing specifically with the school library, with securing the position, and with working with school authorities. The chapters on community relationships, directing the social activities, and handling the special school programs are in line with the newer emphasis that is being placed on the school as a center of the community life. The teaching of civics, history, and geography is treated as a single unit, as is also the teaching of subjects which constitute the natural sciences. A large element of public-playground experience enters into the discussion of the recess and intermission program.

The chapters dealing with teaching do not constitute a course of study, for it is assumed that the local or state course of study will be constantly available for reference. The purpose of these chapters is rather to bring into relief the essentials in method and points in teaching that need special emphasis, and likewise to stress the difficulties which the beginner will meet and should master. A minimum of space has been accorded to the theory of education, a maximum to the practical aspects of classroom management and teaching. This is not because theory is held to be of little worth, but because it is believed that the necessities of the beginner make the applied aspects of teaching more immediately important.

Cordial acknowledgments are extended to Henry Holt and Company, New York, for permission to quote from John B. Watson's *Behaviorism;* to A. T. Allen, State Superintendent of Schools, Raleigh, North Carolina, for permission to quote from the North Carolina Handbook for Parent-Teachers' Associations; and to *The Washington Educational Journal*, for permission to quote from an article by Irene L. Freemeyer. Special thanks are due Edwin J. Brown, Dr. H. G. Lull, Mrs. Alice Ripplinger, and J. B. Sargent for the illustrations of school activities.

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THE BEGINNING TEACHER

* * *

PART I

PRELIMINARIES TO TEACHING

THE BEGINNING TEACHER

CHAPTER I

THE WORK OF THE TEACHER

The work of the teacher. The work of the teacher has an ancient origin. It starts with the mysterious appearance of man on the earth. From the beginning, man has been characterized by his superior ability to learn. During the earliest times, however, his life was of the simplest sort. He lived close to nature; his occupation was hunting and fishing. He had a few skills such as the weaving of nets, the making of weapons, and the taking of game and fish; he had a little nature lore concerning the seasons and the habits of plants and animals; and he knew the myths, legends, and history of his tribe. So small was the amount of his accumulated experiences that the matter of learning was incidental or left to chance. In the course of time, however, he made discoveries, extended his skills, and increased his knowledge. He began to do a little agricultural work; he domesticated a few animals. It became clear to him that through industry he could better supply his needs for food, shelter, and clothing. He found a need for government and for the regulation of social practices. In this way he slowly but surely changed his primitive mode of living to one more complex and more difficult to learn.

There developed, in consequence, an ever-widening gulf between the natural conditions to which man adjusted himself incidentally and the new environment which he had made. The time came, at length, when the new social and

industrial environment was too complicated to be dealt with through chance and incidental learning. It then became necessary for the members of each generation to assist the new generation in the business of adjusting itself to the artificial surroundings into which it had been born. The children had to be taught the skills and knowledge of the older people. At first, the adult members of the family were able to do this and at the same time carry on their regular life activities; but eventually the accumulated experiences became so numerous and complex that adults had neither the time nor the ability to perform the teaching function satisfactorily. It then became necessary to have certain persons relieved from the usual adult activities in order that they might devote their time exclusively to teaching the young. Thus evolved the work of the teacher.

Teaching as a vocation. In modern society, teaching has become one of the leading vocations. Inventions, discoveries, research, and industrial and social progress have made the environment more and more complex and intricate all the time. A list of the additions made to knowledge with the changes that have resulted from them in the short period of twenty-five years would be amazingly long. The gulf between the infant life and adult life of to-day is so wide that the child requires many years of guidance under specialized teachers. Approximately two billion dollars are spent annually on education in the United States alone. Over twenty-five millions of pupils are enrolled in day and evening schools. Seven hundred thousand teachers and fifty thousand administrators, supervisors, and research specialists are employed. One hundred and fifty thousand new teachers and administrators are needed every year to take new positions and fill vacancies. Education is now so great an enterprise that years of training are required before one can become proficient in it.

This vast work demands the services of many of the most capable men and women of each generation. It is now being chosen as a vocation by a larger number of ambitious and capable young people than ever before. Teaching today claims, along with the other vocations, careful consideration as a life career. While it merits the efforts of the most gifted, it should be entered upon only after careful deliberation and competent advice. One should not become a teacher for sentimental reasons, or because the profession offers a satisfactory temporary occupation while one is getting ready for law, medicine, the ministry, or matrimony. In considering teaching as a life-work, some of the points to include are:

1. Importance of the work
2. Opportunities for accomplishment
3. Social standing
4. Individual liberty
5. Financial returns
6. Utilization of special aptitudes

1. The importance of teaching. There is no vocation more important than teaching. Education constitutes the only real difference between the rude savage and the most highly cultured man. If education were entirely neglected for one generation, calamity would result. If all material and social advancement except education were destroyed, what was lost would soon be restored. Education is civilization's best investment; it is its only safe insurance. The existence of free government, safety of life, and security of property depend upon the education of the masses. The great professions, such as law and medicine, the arts and sciences, the contributions of genius, and all the advantages of modern society have been made possible through education alone. H. G. Wells says that civilization is a race between education and catastrophe. Whether education wins

or loses depends upon the work of the teacher. The significance of teaching makes the teacher the most important member of society.

The realization that one is rendering an important service makes teaching a highly satisfying profession. There can be no greater service to the race than that of assisting young people to prepare themselves to take their places successfully in society. In addition the teacher has the inspiring knowledge that through education the contributions of previous generations are being retained and improved. There is also the realization that through the public school the interests of the social group are being guarded. Thus it is clear that both present and future welfare depend upon the work of the teacher. The profession holds an appeal for every one who has a real desire to engage in bringing about permanent and general good.

The immediate results of the work are sufficiently abundant to provide inspiration and encouragement. Not all the effects of teaching lie in the distant future. The teacher sees the child growing, developing skills and habits, and acquiring knowledge and ideals under her influence and guidance. She sees him transformed from a crude, unruly, and ignorant individual into a cultured, coöperative, and intelligent member of society. She has the opportunity of helping to form youth at its most plastic period. Horace Mann, a great believer in public education, once said, "Where anything is growing, one former is worth a thousand reformers." The advantage of working with children is well expressed in the saying, "As the twig is bent, the tree's inclined." The teacher lives continually in an atmosphere of growth and development.

2. Opportunities for accomplishment. The ambitious and able person demands a vocation in which he can produce something. He craves the consciousness of achievement.

He wants opportunities for doing original work. He is unhappy in an activity which provides no outlet for his ingenuity. Monotonous routine with unvarying tasks and methods does not attract him; restrictions to self-expression irk him. His greatest happiness comes from the knowledge that he has created something, that he has made a worthwhile contribution to civilization. He may say with Ulysses,

> How dull it is . . . to rust unburnished
> Not to shine in use
> As though to breathe were life.

Any vocation that is to attract superior persons must provide opportunities for individual accomplishment.

Fortunately the teaching profession offers problems of sufficient difficulty and variety to satisfy the most active and creative mind. In it new and difficult questions are continually arising to challenge the person who has the vision to see them. Education is a virgin field for creative work; its surface has as yet been barely touched. The single problem of what should be taught offers of itself a field wide enough to engage the wits and energies of the most capable for many years to come. There is a constant demand for better textbooks and instructional aids. There is always a need for worth-while ideas in methods of teaching, in the measurement of achievement, and in school organization and administration. There is a never-ending variety of pupil differences and interests to be satisfied. There is no end to the number of opportunities for doing original work in the teaching profession.

3. **Social standing.** Every one naturally desires to have others approve what he does; it gives him social standing. He is highly pleased when the social group appreciates his work, and much annoyed when it fails to show this appreciation. It is the common ambition to pursue a vocation

which gives social prestige; social recognition is probably more highly prized than anything else. In a study of several hundred young men and women, it was found that they set the highest value upon social approval, ranking it above wealth, wisdom, fame, popularity, physical fitness, and beauty. Obviously the social standing of any vocation helps to determine the type of persons who enter upon it as a life career.

Until recent years, teaching has not commanded the social recognition which its importance justifies. This has been owing to certain explainable attitudes rather than to any lack of value in the profession. Success is measured largely in terms of material accomplishment as, for example, the amount of money made, and such material accomplishment is more evident in many other vocations than in teaching. It has been difficult to measure the success of the teacher in terms of what can be seen. The success of the business man is measured by the number of dollars he makes, the number of employees he has, and the size of his establishment. The success of the lawyer is measured by the number of cases he wins; that of the doctor by the number of people he cures. This is all in terms of an amount of something. How many dollars have been made? How many cases have been won? How many people have been cured? These results fit closely with the common idea of success.

Success in teaching. The results in teaching have been less obviously associated with the modern idea of success than have the results in other professions. This fact has had its influence, of course, on many young people; they naturally hesitate to enter a profession in which they may fail to receive adequate recognition for ability, faithfulness, and achievement. The teaching profession has consequently been forced to accept within its ranks large numbers of persons who would not have inspired the confidence

and high esteem of others no matter in what vocation they might have engaged. The social status of teaching has often been erroneously judged by the lack of recognition given its inferior members. There have always been in the teaching profession many men and women who command as great social recognition as individuals in other vocations. This fact should not be overlooked when one's possible social status as a teacher is being considered.

Moreover, the social status of the teacher is constantly on the up-grade. So pressing is the need for education, so great is its influence, that we are entering upon what is often called the era of the teacher. A larger proportion of the best minds are devoting themselves to education. The aims of education are being more closely defined; the means of measurement are being made more reliable; and to-day outstanding success in teaching will seldom be overlooked. The superior teacher stands in a strategic position for creating proper recognition of her profession. Other vocations are relatively helpless, except as material results force recognition. The teacher, on the other hand, has it within her power to mold the whole public attitude, as she will, to the office of teaching, and all in one generation. Horace Mann prophesied that education would one day be revered as the highest of earthly employments — a prophecy which is being rapidly realized. No commanding personality, therefore, any longer sacrifices social standing when entering the teaching profession; all the prestige such persons need will be accorded them to-day.

4. **Individual liberty.** Individual liberty is about the last thing that a self-respecting person will forego. No person of spirit wants to enter a vocation in which his personal freedom will be unduly hampered. He wants to keep his right to think as he pleases; he does not want some one else to dictate his beliefs and opinions. There is also an

instinctive tendency to avoid the things which would interfere with the freedom to act independently. No one should enter upon a life-work without considering whether it will require too great a sacrifice of the individual liberty to think and act as one wishes within reasonable limits.

No doubt many persons who would have made good teachers have shunned the profession because they felt that their personal and professional conduct would be subjected to the petty notions and personal prejudices of the uninformed and unqualified. Every community has a few individuals who take it upon themselves to prescribe social standards for all, and who feel divinely called upon to judge the conduct of others by these narrow and personal moral codes. They are especially likely to make the teacher the object of their attention. Every one has had more or less contact with public education; many make their slight acquaintance an excuse for assuming an authority in the teacher's realm which in point of fact they have not the ability to exercise.

Nevertheless, if individual freedom has been hampered more in teaching than in other professional service, it is not wholly because of the nature of the work. Some of the blame must be put on the individual teachers themselves. The custom in our free society is to give every one about all the liberty he is capable of exercising. The fact is that many teachers are young and inexperienced, being just out of the elementary school or the high school, and youth and inexperience make impossible the granting of entire freedom of action. The freedom of the profession for the individual must not be judged altogether by the restrictions put upon the beginners. Learning to conform willingly to the well-established and universal restrictions which society imposes is probably as salutary an experience for young people as

there is. The rule, "When in Rome, do as the Romans do," is sound advice.

One should remember, too, that experienced teachers in city school systems have about as much personal and professional freedom as is accorded any one. No member of society can do exactly as he likes; all of us are governed by certain standards of conduct. The banker, the lawyer, and the doctor must conform, as well as the teacher; often they have to cater to the public in ways which the teacher does not. Teaching hours are no longer than the hours in other kinds of responsible work. During this time the expert teacher meets with no interference; any teacher, in fact, is almost wholly free to follow her own ideas. Out of school, the teacher can participate in any social activities which are enjoyed by the best people. She has a large amount of free time, too, which she can plan to use as she wishes. She does not have to work overtime; she keeps all the holidays, and she has long vacations. When all the facts are considered, there is probably no vocation that offers more personal freedom than does teaching.

5. **Financial returns.** Adequate financial compensation is another essential factor of any occupation. It is an important element in choosing a life work. Every adult has many economic demands to meet. He must provide himself with food, clothing, and shelter; bare necessities will not satisfy him — he wants comforts and luxuries. Unless a vocation carries sufficient remuneration for meeting these economic demands, it will not attract many of the most promising young men and women. This does not mean that they are commercially minded, that they are mere dollar chasers. It means that they know they will be unhappy and inefficient unless they get enough salary to insure a satisfactory standard of living.

Teaching has the general reputation of being an underpaid

profession. Recently there appeared in one of the big daily newspapers the statement that "Education pays unless you settle down to be an educator." It is not altogether true, however, that salaries in this work are low, though to be sure they are lower than they should be for the best interests of education. It must be remembered that the average of teachers' salaries includes the low wages of a large group of teachers many of whom are immature, untrained, and transient. Even at their low wages, some of these are paid more than they are worth; and almost all of them are paid more than they could obtain in any other occupation. It should be borne in mind that the lowest salaries do not represent the possible financial returns of the more competent teachers.

Better-salary schedules. The proof of the statement that competent teachers get high returns may be obtained by examining salary schedules. There are rural and village schools that pay their teachers from one hundred and fifty to one hundred and eighty dollars a month. A good example of the tendencies in salaries is shown in the schedule recently adopted in a city of 300,000 population. (See Table I.)

While this represents far better conditions than are found in a large per cent of the schools, it serves to indicate the possibilities in regard to salaries, and it is in line with the present trend in teachers' salaries. The profession never will give as large financial returns as can be obtained in many other occupations, and those whose ambition it is to acquire wealth should go into banking, railroading, law, real estate, manufacturing, or business. The main attractions in teaching are of another kind. Though the material rewards for the work remain modest, there is a certainty about them which cannot always be counted on in other vocations. The teacher is sure to receive her salary. The person whose income is dependent upon sales and fees has many worries

which the teacher escapes: collections, hard times, and bad investments are some of these.

TABLE I. A LARGE-CITY SALARY SCHEDULE

	Minimum	Annual Increases	Maximum
Teachers:			
Kindergarten	$1400	$100	$2800
Elementary	1400	100	2800
Junior high schools	1800	100	3200
Senior high schools	2200	200	3800
Principals:			
Primary schools	2800	200	4000
Grammar schools	3500	200	5000
Junior high schools	4100	200	6000
Senior high schools	5000	500	7000
Vice-principals:			
Elementary schools	1500	100	3200
Junior high schools	1900	100	3600
Senior high schools	3500	200	5000
Supervisors	2500	200	4000
Vocational counselors	2000	100	3400
Special teachers:			
Of delinquents	2000	100	3400
Of ungraded pupils	1700	100	3100

6. Utilization of special talents. The teaching profession offers an unlimited field for the utilization of special talents. There are many types of schools, and in each type there are many different kinds of work to be done. Giving actual instruction is not the only thing in educational work; administration, supervision, and research are other phases. There are also positions in the school for the physician, dentist, psychologist, nurse, lawyer, architect, engineer, building contractor, attendance officer, business manager, welfare worker, accountant, chauffeur, machinist, plumber, carpenter, janitor, bookkeeper, stenographer, secretary, clerk, printer, librarian, gardener, and storekeeper. Many

talents can find expression within the realm of the modern school system.

On the instructional side, there is also a vast range of opportunities for choice. Persons who have special interests in any particular subject, such as history, chemistry, literature, music, or athletics, will find positions suited to their interests in high schools, colleges, and universities. Persons who are interested in the elementary school will find places in the kindergarten, primary, intermediate, and grammar grades. Those who enjoy dealing with special classes will find opportunities to teach the ungraded, gifted, subnormal, blind, deaf, crippled, delinquent, or non-English-speaking pupils. There are industrial schools, trade schools, commercial schools, and correspondence schools. One of the latest and most important developments is the evening school; there are more students enrolled in the evening schools of many cities, and even of States, than are found in the day secondary schools. There are many opportunities for writers, lecturers, and organizers. In fact, the scope of the modern school is so great that almost any useful talent may be utilized in the work of education.

Specialization. This is an age of specialization, and the work of the teacher is no exception to the rule. The "jack-of-all-trades and master of none" is no longer in much demand. Teaching was once combined with other vocations; teachers farmed, preached, practiced law, and traded, as well as taught. Finally there came a time when the teacher had to discontinue these side-line occupations. It was a long while after that before specialization became general in the teaching profession. A teacher taught everything that was to be taught: history, science, mathematics, music, art, penmanship, and literature. This situation is now rapidly passing, except in isolated rural communities, and to a greater and greater degree individual teachers are

devoting themselves to a special type of work — kindergarten, for example — or to teaching related subjects, such as history, geography, and civics; or to teaching a single subject, such as reading; or to teaching the subjects of some one grade. The teacher no longer presumes to be able to do everything, nor to be prepared to do all kinds of school work.

This specialization is largely the outcome of the growth of cities and of the consolidation of village and rural schools. So long as small, out-of-the-way communities remain there will be a need for a certain number of teachers who can do work of a general type, just as there is still a need for some general practitioners in medicine. With the development, however, of good roads, rapid transportation facilities, larger communities, and more advanced administrative policies, the specialization of teaching will tend to become the rule.

The prospective teacher and the beginner should therefore analyze the possibilities of specialization. Each should choose the type of work to which she is best adapted, and in which she feels the greatest interest. While securing training in many subjects, she should try to become a specialist in some one branch or department. There are three main points to be considered: (1) her abilities, (2) her interests, and (3) the opportunities that the work affords. At present there is a demand for specialists in every branch of elementary school work, and in such subjects as science, music, mathematics, domestic science, shop, and commercial work in the secondary school. Teachers who can direct special activities such as glee clubs, orchestras, athletics, debating societies, clubs, and publications, are always in demand. To be able to do something exceptionally well is an important qualification for teaching.

Opportunities for the beginner. The beginning teacher

is seldom able to pick and choose her first position. Her opportunities are more or less limited, and she has to take what is available. Usually she must start at the bottom of the ladder, and she ought to be willing to do so. This is a feature of other vocations, and it should not prove discouraging. The better positions naturally go to those who have proved their ability to outgrow the poorer ones. Opportunity to do service, to learn, and to succeed should count more with the beginning teacher than salary. The fact that a school is small and its location remote should not count too much against it in her calculations. The fame of a good teacher always travels, even from the loneliest frontier neighborhood.

Beginners must also often start their work with teaching some subject or subjects or classes for which they have not had special preparation. An expert in primary reading may be asked to teach seventh-grade arithmetic. The beginner should anticipate this possibility and should not let it discourage her. She will be wise not to complain or to refuse to try. Patience and hard work will eventually bring success and the type of work desired. In the meantime, she should put forth her best efforts to do an excellent piece of work where she is. Nothing will be accomplished by dreaming about what she would like to do. Lincoln was right when he said, "If you intend to go to work, there is no better place than right where you are."

The first experience. The teacher's first experience is likely to be her most difficult. As was said above, a teacher's training may have been for work that is entirely different from the work she is required to do. Many of her problems will be new and complex. The children may appear rude and unsympathetic. If it is a rural school, the list of pupils will represent all the stages of the compulsory-attendance period, comprising many, if not all, the grades found in the whole

elementary school. Often with meager equipment, obsolete textbooks, and dull and unattractive surroundings, she must begin to teach her first school. But conditions are hopeless only if she finds them so and gives up, for with persistence she can change the surroundings and transform the attitude of the most idle and mischievous of the children.

The teacher who begins in a city school often acts at first as a substitute. Substitute teaching is a difficult type of work. The teacher does not know the pupils, and so she cannot be familiar with their work. To a certain extent they are likely to resent the coming of a new teacher, and consequently may take advantage of her in every way they can. She will find the experience much like a succession of first days of schools. The better city school systems are at last realizing the unusual difficulties of the substitute, and are tending to appoint some of the strongest and most experienced teachers as regular substitutes, at higher salaries. The inexperienced teacher is then put over a regular room as a cadet; there she may receive careful supervision and guidance. This is the better plan. It practically provides a period of interneship such as the physician goes through before he is allowed to practice medicine on his own responsibility.

The first years of experience constitute an important period in the teacher's career. In them she is forming habits that will either promote or retard her future success. Her reputation is being established. This first work cannot be entered upon too carefully or with too strong a determination to succeed. She should not decide at the end of the first month or the first year that she does not like teaching; that is giving up far too easily. Those who go through the preliminary period successfully become excellent teachers, for it is the hard tasks, if one is equal to them, that make for

capability. The training which the prospective teacher receives before taking a school can provide nothing more than a foundation; upon this foundation she must build her own future. With an understanding that the work is difficult, with as complete training for it as it is possible to obtain, with a willingness to work, a cheerful outlook on life, and a persistence that does not yield, she may find the first experience, in which so many new and interesting things are to be met, a most pleasurable one.

Chief causes of failure. The wise person profits by the experiences of others as well as by his own. He steers clear of the pitfalls into which others have fallen. The old saying, "Forewarned is forearmed," applies here. The beginner should try to avoid those situations which have caused others to fail or which common sense tells her will prove detrimental to her success. A review of the causes of failure will show that they are largely personal, and that they are avoidable or at least within the teacher's control. These causes are:

1. *Weakness of discipline.* Inability to discipline is the chief cause of failure.
2. *Lack of judgment.* This covers a wide variety of matters. Lack of judgment may be shown in deceit, frivolity, keeping company with pupils of the opposite sex, a bad temper, attending questionable places of amusement, extreme styles in dress, lack of dignity, or any kind of queer or sensational behavior.
3. *Deficiency in scholarship.*
4. *Poor methods.*
5. *Lack of sympathy with children.*
6. *Insufficient daily preparation.*
7. *Deficiency in social qualities.*
8. *Personal unattractiveness.*
9. *Unprofessional conduct.*
10. *Laziness.*
11. *Poor health.*

In the succeeding chapters there are suggestions made for strengthening weak points in character, personality, knowledge, and methods which should, if followed, save one from the unpleasant experiences which accompany failure. The supplying of deficiencies and the practice of caution, while deservedly important, are not all there is to success. Even more important is the cultivation of a positive attitude that makes it possible to capitalize the strong qualities in one's make-up. The good old pedagogical maxim, "Know thyself," applies particularly to distinctive elements of character. The beginner need not know all there is to know about teaching, but she should know well what she does know and should be able to use her knowledge. The succeeding chapters suggest ways and means for avoiding errors, and they lay particular emphasis on the definite things which should be a part of every teacher's equipment.

Summary. The work of the teacher has been evolving since man's appearance on earth. Teaching has now become one of the most important and highly specialized of vocations. It affords the most capable of each generation a splendid opportunity for service. No profession is more important, and none offers greater opportunities for creative achievement. Teaching is fast coming to command as high social recognition as any vocation. There is no type of public service that carries more individual freedom. The financial returns are not so discouraging as they are sometimes pictured, and they are improving, anyway. The variety of the duties involved is large enough to provide a place for any useful, special talent. The beginner must be content to start at the bottom and capitalize her experience as she goes, grudging no effort. Inasmuch as final success depends largely upon the ability she displays in the beginning, she should safeguard herself against mistake, and improve her strong qualities with all her might.

EXERCISES AND PROBLEMS

1. Compare the work of the teacher with that of the other professions, with regard to the number of people it reaches and the number of persons required to carry on the work in present-day society.
2. Give all the reasons you can why teaching should be brought to the attention of promising young people as a life career.
3. Discuss the statement, "No vocation is more important than that of teaching."
4. Suggest some school problems that require solution by the best minds.
5. Compare the teacher's social standing in any community with that of persons of various other vocations. Account for the differences in the social standing of different teachers in the same community.
6. Compare the individual liberty that the teacher enjoys in the community with that of the physician, lawyer, banker, business man, and minister.
7. Suggest all the ways you can for increasing the financial returns in the teaching profession. Would it be a good thing for salaries to be sufficiently high in the teaching profession to attract persons of commercial tendencies?
8. Show how almost any worthy talent can find expression in the modern school system.
9. Why must the modern teacher be a specialist?
10. Show in what ways the teacher's first experience is a critical time in her teaching career.

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CHAPTER II

THE TEACHER'S EQUIPMENT

The teacher's equipment. Some think that very little special equipment is needed for teaching. Barnard [1] relates a significant incident from the autobiography of the German schoolmaster, Dinter, which illustrates this attitude. A military man of great influence once urged Dinter to recommend as a school teacher a disabled soldier in whom he was interested. "I will do so," Dinter replied, "if he sustains the requisite examination." "Oh," said the Colonel, "he doesn't know much about school teaching, but he is a good, moral, steady man, and I hope you will recommend him to oblige me." "Oh, yes, Colonel," was the answer, "I will do it to oblige you, if you in turn will do me a favor. Get me appointed drum-major in your regiment. True, I can neither beat a drum nor play a fife, but I am a man as good, moral, and steady as ever lived." It was not very long ago in our country that the main qualifications for teaching were considered to be a strong right arm and a sound religious faith.

Whatever the earlier conceptions of teaching ability may have been, the situation to-day is vastly different. No person can now advance far in the profession without giving much time to his training and development. A good personality, sound training in subject-matter, and thorough professional preparation are indispensable. Personality is partly inborn and partly acquired. It consists of all the personal traits which make or mar one's success: health, appearance, sincerity, optimism, willingness to coöperate

[1] Henry Barnard: *Normal Schools and Other Institutions*, p. 119.

and their opposite traits are examples. Professional skill and a knowledge of subject-matter are purely the result of training. It is not expected that any teacher will be perfect at the start; throughout her service one of the questions uppermost in her mind should be, "How can I improve myself as to personality, mastery of subject-matter, and professional skill?"

Subject-matter training. Every teacher should include a good proportion of subject-matter in her training. By subject-matter is meant the subjects which she teaches and the subjects which are basic to teaching: spelling, penmanship, history, language, reading, and the like. It is necessary that she know more than she teaches. The best way for her to increase her knowledge of subject-matter is to make careful daily preparation for her teaching. In following this plan she will find, at the end of two or three years, that she has actually learned more than during her entire student life. She is now studying at an advantage because she brings to her work the teaching point of view; she seeks to understand and to know in order that she may make what she teaches clear to others. It was Horace who said, "One learns by teaching."

For the teacher to make advance merely in the subjects that she teaches is not enough. She should take up new subject-matter continuously. The authors of this book know one teacher who learned French while riding on the street car to and from her work; another has mastered one of the important branches of mathematics through home study. It takes the whole of life to make an educated man. How absurd it is to talk about a person's having finished his education when he graduated from high school or when he obtained a college diploma! Opportunity will come to those who get ready for it. A few minutes a day given to study and reading of an informational nature will greatly broaden

the teacher's field of knowledge and will in time make her a scholar. As Franklin said, "Being ignorant is not so much a shame as being unwilling to learn."

Professional training. It is equally important to have secured good professional training. This involves knowledge as to how schools have developed, what education is for, what kind of education is of the greatest worth, how to teach effectively, how to measure the results of teaching, how to direct study, how to keep pupils interested in school, and all the other dozens of details which are a part of technique and method. In some respects, professional training requires more careful attention to details than does subject-matter training. For one thing, it is likely to become out-of-date sooner. The spelling of a word seldom changes; the facts that two plus two are four and that water runs down hill are eternal. But teaching is a growing profession, and its stock of ideas and methods is increasing every year. Some one has said that if an educational book is more than ten years old it is behind the times and therefore not worth reading. It is even surer that a teacher who has neglected her professional reading and study for ten years is out of date.

There are several means at hand for acquiring professional training. One of the best is professional reading. Every teacher should plan to read regularly two or three good magazines that are published in the interests of her calling. *The Normal Instructor and Primary Plans* is one of the best for a beginner. She should also plan to read each year a few of the best books on teaching; those that are listed in this volume at the close of each chapter would provide quite a liberal professional education. Houghton Mifflin Company, Boston, publish a little Bulletin — which will be sent on request — in which are given outline courses of professional reading and also hints and suggestions for read-

ing and selecting books.[1] Other means of improvement which should be used whenever possible are the summer school, the teachers' institutes and meetings, and visits to other teachers. When a teacher begins to resent new ideas and talk about present-day "fads and frills," she may take it as a fairly good sign that she should be giving heed to improving herself in her profession.

The teacher's personality. Personality has been called the greatest factor in the success or failure of teaching. The professional and subject-matter training of two teachers may be substantially the same, yet one teacher may prove a marked success, the other a complete failure. One of them makes friends; the other makes enemies. The only explanation of this, apparently, lies in the fact that they differ greatly in those personal traits which go to make up what is called personality. In a study made by Lang, it was found there was no correlation between the amount of training that the teachers who were studied had received and their success in the work. It goes without saying that many teachers do improve as a result of training, nevertheless there is something far more important than the number of years spent in study. This more important factor is personality. While training is essential in teaching, personality is fundamental.

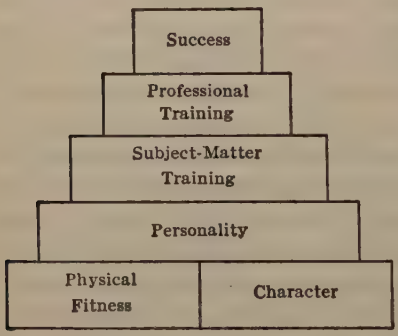

FIG. 1. STEPS TO SUCCESS IN TEACHING

[1] *Reading for Professional Advancement.* Houghton Mifflin Company, Boston, 1927.

Marked differences in personality traits may be observed by any one. Nature is not impartial in distributing her favors. To a few she is very generous, to the majority moderately so; with the remainder she is sparing. Personality, however, is not dependent upon Nature alone. To a great extent it can be acquired; it is our natural endowment plus our living, our reading, and our thinking. As some one has said, personality is the product of all our yesterdays. A few individuals have naturally certain conspicuous personality traits that make them "born teachers," but there are not enough of these people to supply anything like the demand. The great bulk of teachers must be "made." A good teaching personality is not a mere accident; it is within the reach of every teacher who is willing to put forth the effort necessary for its attainment.[1]

Personality traits. The first step to take in improving the personality is to center effort upon definite traits that need altering. Not all of these traits, of course, are known. It is very difficult to say just why one person attracts people more strongly than another. It may be that the one possesses qualities which the other does not have; it may be that the one has certain important qualities in a higher degree than the other has. She may be a little more human; she may be more sensitive to her social surroundings; she may respond to situations more quickly; she may be slightly more vivacious. Out of the many personality traits that have been noted a few are accepted as essential to success in teaching. The ten most important of these are:

[1] John B. Watson defines personality as "the sum of activities that can be discovered by actual observation of behavior over a long enough period of time to give reliable information. In other words, personality is the end product of our habit systems. Our procedure in studying personality is the making and plotting of a cross section of the activity stream." (In *Behaviorism*, p. 220.)

1. Sympathy
2. A good personal appearance
3. A good address
4. Sincerity
5. Optimism
6. Enthusiasm
7. Initiative
8. Vitality
9. Fairness
10. Dignity

1. **Sympathy.** Sympathy consists of an encouraging and helpful attitude towards others, based upon an insight into their feelings, hopes, and aspirations. It involves having knowledge of the common disappointments and sorrows of life. The good teacher should have enough imagination to put herself in the place of others and to realize, in a situation, how she would feel under similar circumstances. A person who lacks sympathy never becomes a popular leader and is never well liked by children. The authors of this book know of a most intelligent and capable woman who often laments her inability to enter into the lives of others. "I recently accompanied a friend," she said, "to a home where a death had occurred. I at once saw there were things to be done, and went about washing the dishes, sweeping the floors, and putting things in order. My friend spent the hour or more weeping with the mourners, comforting them, and discussing the good qualities of the deceased. When we left, the family crowded around my friend thanking her for coming, and praising the good she had done; me they barely thanked." This story helps to show that in making the best human contacts efficiency is not enough; the person who is able to exert the strongest influence is the one who knows how to touch the heart. A sympathetic teacher will make the pupils feel that she is their friend, and in response they will put forth their best efforts to please her. It is not very complimentary to teachers as a class when boys are quoted as saying, "Gee, Miss Brown, you're not a bit like a teacher; you're so human."

Sympathy should not, however, be confused with senti-

mentalism. The teacher who merely pities the children, tolerates and excuses their misdoings and is generally over-indulgent with them, is not being sympathetic in a way that signifies strength of character. Children think of the sympathetic teacher as being not only kind, good-natured, and approachable, but gently firm also. Firmness and strict insistence upon attention to school duties do not detract from one's power of sympathy. Moreover, children do not like "easy" teachers. The sympathetic teacher is never sarcastic, rude, harsh, and fault-finding. While she expects each pupil to meet reasonable standards, she appreciates his difficulties and is willing to give kindly and intelligent help.

The unsympathetic teacher never gets along well with her pupils, and she frequently has difficulties with their parents. Her attitude is one of the chief causes of disciplinary problems. The only way to cultivate sympathy is to make it a matter of daily practice, like the Boy Scout's daily "good turn." A teacher gets a good opportunity to do this when she feels that she does not like one of her pupils or suspects that he does not like her. To do something for him, and then have him do something for her on the principle that one good turn deserves another will go far toward establishing a state of sympathy between them. A third suggestion in this connection is for the teacher to study each pupil intimately and to congratulate him on his victories and comfort him in his defeats. Any negative tendencies, such as rudeness, a disposition to scold, and severity of attitude, should in the meantime be dropped. Fourth, the teacher should make every effort to be tactful — to try to please people, not to hurt or anger them. The final outcome of all this is good teaching.

2. Personal appearance. The influence of the physical appearance upon one's personality is seen every day. Proper attention to personal neatness and to good taste in dress

can make an almost complete transformation in personality. This transformation is due not only to the appearance itself but also to the feeling of assurance and self-confidence that looking well gives a person. A great sociologist speaks approvingly of the woman who remarked, "There is nothing which gives me such happiness and assurance as the knowledge that I am becomingly and appropriately dressed." A way for the teacher to improve her personality is to appear at all times, so far as dress and neatness are concerned, at her best. The neglect of this duty is often a sign of other undesirable personality traits. The beginning teacher will do well to get some good advice as to how she can appear at her best. Normal schools and high schools ought to provide courses in "personal adornment," or in a similar field, that would give prospective teachers the help they need. Attention to dress, cleanliness, complexion, and carriage will pay big dividends.

The truth of this statement may be shown by the following incident. An appointment bureau failed to get a position for a certain teacher, although she ranked high in scholarship, character, and teaching ability. She was interviewed by many principals and superintendents, but all in turn refused to appoint her. When the director of the bureau asked a superintendent why the candidate was not acceptable, he replied, "She is too old-fashioned and dowdy." The director then suggested to the teacher that she make some effort to improve her personal appearance. The advice was received gratefully. She arranged her hair in a fashionable way, dressed herself in stylish and becoming clothing, and exchanged her owlish horn-rimmed spectacles for a more attractive-looking pair. A marvelous change was effected in her appearance. Then she renewed her application to the superintendent who had criticized her, and was promptly given a position in one of his schools.

3. Address. The term "address" means, in the large, the manner in which one meets people. Great emphasis is laid, in the business world, on having a good address; evidence of this fact can be seen in every successful professional office and in every store, hotel, and other well-managed enterprise. Courtesy, deference, and well-manifested interest are the principal qualities of a good address. A teacher should develop the ability to meet people graciously and pleasantly. She can do this through observation of others and practice in meeting people, by being thoughtful and agreeable, by refraining from sharp remarks about others, by wide reading of good literature, and by travel. She should associate occasionally with adults who are engaged in other vocations, and should cultivate an avocational pursuit such as music, art, or collecting.

4. Sincerity. Many are loath to place side by side the two attributes — honesty and tact. With a sincere teacher what she thinks, feels, and believes is absolutely consistent with what she does. Tact does not consist in saying pleasant things at the expense of truth. It is in reality the union of sincerity with regard for others. Merely as a matter of policy it is a serious mistake to say things that others will like to hear without having due regard for the truth. Although most people welcome compliments now and then, giving praise becomes offensive if carried to extremes, and the person who overdoes it will get a reputation for insincerity. Teachers who are not sincere will not succeed, for the simple reason that the American youngster of to-day refuses to be fooled. Pupils may misunderstand a teacher's motives at times; but if they have perfect confidence in her sincerity, they will not question the wisdom or justice of her acts.

Once the teacher gives a child occasion to feel that she is untruthful, she is lost. It would be well if she would

take the children into her confidence when it is possible; and when it is not, she should make it clear that she would like to. Sincerity in a teacher is not restricted to her dealings with her pupils only, but extends to her fellow teachers, school officers, and all others with whom she comes in contact. The best advice that can be given on the subject is, "Be yourself." Do not put on airs and affect ideas and views that are not your own. Taking due care, of course, not to offend — be candid.

5. Optimism. Optimism is an attribute of successful people in every walk of life. The world is attracted by the cheerful, hopeful person, the chronic "grouch" is shunned. Certainly the chronic grouch has no place in the classroom. She is constantly complaining, and yet she seldom does anything to improve herself. She infects others with her "blues," and before long the whole school is a sad place. The optimistic teacher genuinely believes that things will turn out all right; she is never depressed. She has faith in herself; she inspires the same faith in others.

There is an attribute of optimism, the sense of humor, which was at one time practically prohibited in the schoolroom but is now regarded as an essential there. In some schools, still, joy and mirth are refused admittance; the boy with a smile is looked upon with suspicion, as though he had done or is about to do something that is not in accord with the rules. But as a general thing, these days, the ability to laugh is recognized as one of the quickest ways out of trouble. A teacher with a good sense of humor can often pull herself out of a serious predicament. Moreover, this quality prevents her from yielding to despair when burdens seem unusually heavy. Cheerfulness is very infectious, and a happy teacher is a good index to a busy, contented class. A little song, popular among radio audiences, expresses the idea of the value of humor:

The world loves a smiler,
Who lets the sunshine in,
Who greets you when he meets you
With a big, broad grin;
Who takes you by the hand,
And makes you understand,
The world is what you make it,
Why not make it big and grand?

Nine times out of ten the pessimistic outlook is the result of an unhealthy physical condition. There is an old saying to the effect that living is all right if all is well with the liver. The teacher who finds herself slipping into gloomy moods should look into her manner of living and her physical condition. Comfortable living quarters, good wholesome food, plenty of outdoor exercise, and eight or nine hours of sleep — some of it before midnight — are essential to good physical health; and physical health is basic to mental health. Much of the teacher's philosophy ought to concern itself with insulating her against trifles that worry and moving her to play with light-hearted companions and to read for the pure fun of reading. Happiness, hopefulness, and good humor are necessary elements in a personality of the highest type.

6. Enthusiasm. In the language of the street, enthusiasm is the gas that makes the engine go. Without it ability and knowledge tend to remain inactive. Effective teaching is done only under the impulse of that zeal and vigor which come from enthusiasm. Unless the teacher is enthusiastic about the subjects she teaches, how can she expect her pupils to be? After Pythagoras discovered the famous principle that the square formed on the hypotenuse of a right-angled triangle is equal to the sum of the squares formed on the other two sides, he organized a secret society in whose initiation program the secret was revealed with

great ceremony. Would it not make a great difference in the learning of the pupils if the teacher of to-day taught with enthusiasm like that, the truths of mathematics, history, science — as if she were initiating the pupils into deep and vital mysteries? The thing that a teacher is teaching should seem to her, for the time being, the most important thing in the world.

7. Initiative. Initiative is the ability to start things going. It is the very opposite of the indolent, ordinary, commonplace habit of mediocre people. The teacher who has initiative is not afraid to undertake new responsibilities; she displays originality in her thinking and teaching, and she encourages the manifestation of the creative spirit among her pupils. Having pronounced interests of any kind may be a good sign of having initiative, and should be encouraged. It is easily possible to develop initiative by forming the habit of making decisions for one's self and depending less upon others, by persisting in a course of conduct once resolved upon, by exercising self-control, and by building up a sound scholarship. Woodworth, a reputable psychologist, has said that a person is not likely to show initiative or originality until he has assimilated what others have done in the same field. There is ample reason for recommending that one master the work of others before striking out for himself.

8. Vitality. A good teaching personality must have vitality, by which is meant physical endurance and abundant energy. Spencer maintained, "To be a good animal is the first requisite of success," and Edison expressed a similar idea when he declared, "Success is ninety per cent perspiration, and ten per cent inspiration." While sound health is not the same as vitality, it is basic to it. Vitality is activity, force, and what may be called a real joy in living. The best means of promoting it is to follow a definite re-

creational program, safeguard the health by careful habits, and maintain a strong, positive mental attitude.

9. **Fairness.** Another requisite for success is a sense of justice. Pupils are very sensitive to its lack; they will forgive a teacher almost anything except unfairness. Unfair action is usually the result of snap judgment and hasty action; it is sometimes the result of a tendency to have particularly strong likes and dislikes. Fairness of attitude and action is developed by giving careful consideration to the needs and problems of each child, by conferring with others before making decisions, and by following sound principles. There is no likelihood of the teacher acting unfairly if she treats all the children with courtesy, kindliness, and consideration; if she keeps cool in an emergency, by not speaking before she considers the consequences, and by basing her decisions upon the facts in the case. Naturally a teacher cannot avoid liking some children more than others; differences in their personality-traits make for this. She cannot "treat all alike," because these same differences necessitate differences in treatment. She can, however, judge each "according to the law and the evidence" and not according to her own feelings.

10. **Dignity.** It is a common observation that dignity of manner adds charm to the personality. The person who is rowdy, familiar in her conversation, loud and noisy, quarrelsome, rude, or impolite will never succeed as a teacher. Dignity may be thought of as being the opposite of cheapness, or being too free in manner. It does not signify stiffness, aloofness, or coldness. Dignity is respected and admired; the lack of it will cost the teacher the support of pupils and parents about as quickly as anything will. Many young teachers make a point of trying to be "a good fellow" with the children. No teacher should carry this to the extent of permitting the pupils to treat her as familiarly as they treat one another.

A summary of personality traits. The ten personality traits so briefly discussed here by no means exhaust the list. Among the many others are self-reliance, adaptability, loyalty, punctuality, ability to coöperate, interest, reticence, and accuracy. The late President Eliot of Harvard summed up the requirements for a successful teacher in a fairly concise manner when he said: "For the thoroughly successful teacher, there can be but one standard: she must be an angel for temper, a demon for discipline, a chameleon for adaptation, an optimist for hope, and a hero for courage." A fairly complete list of characteristics is given on the rating sheet, on pages 36–37.

William DeWitt Hyde in his educational monograph, *The Teacher's Philosophy in and out of School*, gives five principles of personality as five of the world's great teachers have developed them. To the problem of personality, he says, five answers have been given: the Epicurean, the Stoic, the Platonic, the Aristotelian, and the Christian. The Epicurean says, "Take into your life as many simple, natural pleasures as possible." The Stoic says, "Keep out of your mind all causes of anxiety and grief." The Platonist says, "Lift up your soul above the dust and drudgery of daily life, into the pure atmosphere of the perfect and the good." The Aristotelian says, "Organize your life by a clear conception of the end for which you are living, seeking diligently all means that further this end, and rigidly excluding all that would hinder or detract from it." The Christian says, "Enlarge your spirit to include the interests and aims of all persons whom your life may in any way affect."

Improvement of ability. The teacher's aim should be improvement, rather than perfection, in ability. The first step is to check her present standing in respect to a large number of traits, such as are given in the personal-rating

form on page 36. Perhaps it is even better to use the comparative method. In this she takes some one trait, say sincerity, to reckon by. She then decides which of her acquaintances ranks highest in this quality; which ranks lowest, which takes an average ranking; which comes between average and the highest; and which comes between average and the lowest. The names are written down in order, the highest at the top of the list. She compares herself with the five selected individuals and places her own name beside that of the one whom, in her own judgment, she most resembles. Then she checks herself on the rating form as strong, above average, average, below average, or poor. A final score on personality can be made by counting five points for "strong," four for "above average," three for "average," two for "below average," and one for "poor."[1]

After estimating one's standing in the various traits, the next step is to plan what to do. It is to be expected that the most important traits and the traits in which the individual is lowest will be the ones selected for improvement. As to a program, McKenny suggests, in order: (1) the desire to improve, (2) the selection of definite ideals, (3) the selection of a suitable environment, (4) the selection of friends who embody the desirable traits to a high degree, (5) the reading of good books, and (6) active participation in community life. John B. Watson advises the unlearning, by disuse, of the undesirable things already learned and the forming of new and desirable habits. The following points of procedure are also advised:

[1] John B. Watson reminds us that, "Personality changes most rapidly in youth when habit patterns are forming, maturing, and changing. If you have an adequate picture of the average individual at thirty you will have it with few changes for the rest of that individual's life — as most lives are lived. A quacking, gossiping, neighbor-spying, disaster-enjoying woman of thirty will be, unless a miracle happens, the same at forty, and still the same at sixty." (In *Behaviorism*, p. 223.)

1. Preparing a daily program of "tasks"
2. Adopting the "success" idea
3. Permitting a large amount of freedom
4. Paying special attention to the health
5. Trying out new experiences

TABLE II. A SELF-RATING PLAN FOR THE MEASUREMENT OF TEACHING EFFICIENCY

(Rank in comparison with acquaintances)

	POOREST 1	2	AVERAGE 3	4	BEST 5
I. ABILITY TO TEACH					
1. Reading					
2. Arithmetic					
3. Spelling					
4. Writing					
5. Art					
6. Music					
7. Social Science					
8. Natural Science					
9. Health and Hygiene					
10. Language					
II. ABILITY TO					
1. Manage the playground					
2. Supervise study					
3. Maintain discipline					
4. Make reports					
5. Keep up attendance					
6. Make a daily program					
7. Measure results					
8. Organize a P.T.A.					
9. Keep the register					
10. Make a lesson plan					
11. Make an assignment					
12. Organize routine					
III. STANDING IN RESPECT TO					
1. Coöperation					
2. Loyalty to school					
3. Personal appearance					

	Poorest 1	2	Average 3	4	Best 5
4. Responsibility					
5. Sincerity					
6. Sympathy					
7. Tact					
8. Speech					
9. Promptness					
10. Leadership					
11. Enthusiasm					
12. Vitality					
13. Address					
14. Persistence					
15. Reserve					
16. Courtesy					
17. Initiative					
18. Sense of fairness					

Summary. The beginning teacher's equipment consists of her training and her personality. Her subject-matter training should give her more foundational material than she expects to need for teaching, and should extend into advanced fields as far as possible. Her professional training should give her a good understanding of methods, techniques, and principles, and should be carried on continuously through reading and study while she is engaged in teaching. Personality is the most important factor in successful teaching. Among the most important personality-traits are sincerity, sympathy, enthusiasm, optimism, vitality, good address, dignity, fairness, initiative, and pleasant appearance. Personality can be improved. The first step to take in improving it is analysis and rating; the second involves the preparation and application of a definite plan. Whether experience advances a teacher in the profession or not depends upon how she uses it for growth and development. If she does not learn she will not be the better for any amount of experience.

EXERCISES AND PROBLEMS

1. Compare the amount and kind of training required for elementary-school teachers with the amount and kind required for trained nurses.
2. Compare the training of the educators holding the better school positions with the training of good lawyers and physicians.
3. There is a movement in many parts of our country toward requiring for elementary-school teachers graduation from a four-year college course. What are the advantages and the disadvantages of this?
4. Compare the personality-traits required for successful teaching with those required for success in several other vocations.
5. Criticize the proposition of requiring all teachers, as part of their training, to serve a two years' interneship under careful supervision before being allowed to teach upon their own responsibility.
6. Describe some personality-trait that you have improved. How did you improve it?
7. Criticize the use of the form suggested on page (36) as an aid to teacher self-improvement.
8. Make up a list of four or five magazines that you would recommend to the teacher commencing work in a rural or a village school. Similarly, prepare a list of a half-dozen or more recent professional books that you would recommend.
9. What subjects are the most interesting to you? Which are considered the most difficult to teach? Which are responsible for the greatest number of pupil failures?

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CHAPTER III

SECURING THE POSITION

Nature of the problem. As was stated in Chapter I, about one hundred and fifty thousand new teachers are needed every year. Probably two thirds of this number are required to fill vacancies which are caused by the death or resignation of teachers in service. Most of the resignations are due to marriage; but some are due to entrance upon other vocations, some to failure, and some to poor health. The normal schools, colleges, and universities supply nearly one hundred thousand qualified teachers annually; the rest of the teachers are trained in high-school training courses, or obtain their certificates by examinations. Most of the vacancies occur in rural schools, because, as conditions now are, no teacher stays in a rural school very long. She either obtains a position in the city or quits. This is very unfortunate; it would be a good thing for the country if more young people would make teaching in rural schools their life work. Most of the new positions occur in city schools, where, as a rule, only experienced and normal or college-trained teachers are accepted.

Three main groups of interests are represented in dealing with the vacancies and new positions. First are the school boards, communities, and superintendents who want to secure the best teachers they can. Second are the teachers themselves, who want to secure desirable positions. Third are the schools where the teachers are trained; they want, naturally, to serve both the school districts and the teachers. It is especially the duty of normal schools, colleges, and high schools that train teachers to see that their graduates are

placed where they will succeed and where they will render good service to society. The prospective teacher also has a duty to perform in the matter of placement. She may have to depend upon her own initiative altogether in securing a suitable position. Therefore suggestions that will help her either to coöperate with appointment bureaus or work for a position without help are given in this chapter.

First essential in the task of procuring a position. The first essential for the prospective teacher is her own sureness that she can meet the certification requirements. These vary greatly among the different States, cities, and positions. Large cities usually have special requirements of their own in addition to what the State demands, but, since few of them will take teachers who have not had at least two years of experience, the beginner is not immediately concerned with city positions. For information concerning certification in one's own State, write to the nearest county superintendent of schools; for information concerning special city requirements, write to the city superintendent; for information concerning other States, write to the particular state superintendent of schools. This should be done in time to make any necessary changes in one's training courses, or in time to get ready for examinations, so that the certificate may be issued before the date for starting work.

There are two ways in which certificates may be obtained. One is by means of a credential based upon specified training. For example, a student who completes the training courses as outlined by a normal school, or the special courses taught in high schools having a teacher-training department, is usually given a certificate as soon as she presents her diploma to the proper authority, which is the county or the state superintendent of schools. A normal-school diploma is as a rule valid in any State; a high-school-training certificate is good only in the State where it is

issued. The diploma and credential from the high school relieve one from worry over examination results and in addition give better preparation for teaching.

Some States combine training and examination methods — for example, Idaho, Montana, and Oregon. Connecticut issues certificates upon examination alone. All other States except Vermont certificate by both methods. Vermont has entirely abandoned the examination method, and issues certificates based only upon training. In California, certificates obtained by examinations are good only in the county where issued. Large cities often require both oral and written examinations in addition to graduation from a normal school or college.

Because any teacher may be confronted with the necessity of taking an examination, a few suggestions are given for guidance.

I. *Oral examinations*

1. Sit up straight, look at the questioner, and maintain an alert attitude. Slouchiness and inattention do not make a good impression.
2. Maintain your composure; do not get excited or angry; "keep smiling." Do not be pert or flippant.
3. Take time to think, but if you do not know what to answer, say, "I do not know." Do not bluff.
4. Make your answers brief and to the point.
5. Prepare for the examination by finding out, from some one who has taken it, what its general nature will be. Reading two or three of the latest professional books and magazines is good preparation.

II. *Written examinations*

1. Prepare by securing the answers to several lists of questions asked on previous examinations. Familiarize yourself with the state course of study.
2. Answer first the questions that you are sure of; leave the hard ones till the last.
3. Distribute your time fairly; do not give it all to one or two questions.

4. Pay attention to the form in which your answers are given. Leave margins, keep the lines straight, underline important statements, and number the divisions properly.
5. Obtain plenty of rest and sleep in the week preceding the examination. Do not sit up late to study the night before a test. Be physically fit.

The appointing authority. The second essential is to know the appointing authority, namely, the person or board to whom one applies for a position. In a city, this is the superintendent or an assistant; in village and consolidated schools, it is usually both the principal and the school board; in rural schools, it is the board of school trustees. Often the clerk of the rural and small-town school board is a person of importance in this connection. While he does not always have a vote, he forms an impression of the candidate from her application, and may express it in board meeting. He looks after the correspondence, and applications should usually be addressed to him, though sometimes it is expedient to send it to the president of the board, or to some strong member. The candidate should be very courteous to every one with whom she comes into contact, from the stenographer to the superintendent.

In applying for a city school, one should not go to the school board nor communicate in any way with its members. All efforts for the position should be directed to the responsible authority. If an assistant superintendent is in charge, the superintendent should not be bothered by an applicant. In village or consolidated schools, the principal should be approached first. One should ask him if it is advisable to call upon the members of the board, and be guided largely by his suggestions. If, however, he has little or no influence in appointments, the board members should be approached directly. In applying for a rural school, one should call upon all the board members personally, if possible.

When to apply. Most appointments are made in the spring and summer preceding the opening of school. In States where school elections are held in early spring, the teachers are selected a month or so afterward. City schools make most of their appointments to new positions in the early summer. The rule should be to find out when the elections take place, and get in one's application a month to six weeks in advance. Because of late resignations and unexpected increases in attendance a few teachers are elected just about the time schools open. The other period of opportunity is around New Year's and the close of the first semester in February.

Where to apply. There are a few rules to guide one in deciding upon where to apply. First, apply where there is the best chance of appointment. This means where there is a vacancy, where the applicant is qualified and certificated, and where her recommendations will count. Since large cities take few or no inexperienced teachers, the only fields available are rural, village, small-city, and consolidated districts.

The second principle is, apply where conditions are the most desirable. This is a very important matter. Frequently teachers do not judge wisely the desirability of a position. Some think the position that pays the most money is the best; others prefer the job with the smallest amount of work and responsibility. Some teachers want to live at home; others refuse to go out into remote rural communities. Although teachers may reasonably differ on the desirability of teaching in a given position, there is one principle that all who expect to continue in the profession should remember. *The most desirable position is that in which one is the most likely to achieve the greatest success.* Next in importance come such considerations as the following:

1. Probability of congenial surroundings — pupils, associates, supervisors, and patrons
2. Opportunity for promotion
3. Opportunity for service
4. Living conditions, such as room and board
5. Opportunity to learn
6. Social and recreational opportunities
7. Working conditions, such as building and equipment
8. Compensation in money
9. Amount of work required
10. Desirability of location

Some beginners are over-particular about their first position. A place may be offered them, but they hesitate about accepting it. They want to wait for other offers; they specify certain localities. If it is impossible to render an immediate decision, a date should be set for giving a definite answer, and on that date the answer should be given. Once the acceptance is made, there should be no withdrawal without the full consent of the other parties to the agreement. It is a valuable asset to have the reputation that one's word is as good as a bond or a written contract.

Should the beginner accept a position in her own district and school is a question frequently asked. Those who advise against it do so because they feel that there the beginner does not have so good a chance for success as she would have elsewhere. They believe that pupils are inclined to be lacking in respect for the teacher who was a student with them and to be unruly and disobedient with her. Some also believe that it is a good thing for the teacher to get away from home and from under the tutelage and direction of parents. So far as the first situation is concerned — that depends upon the teacher and upon the school. Some teachers can succeed in almost any position. Some children are so well trained, and some schools are so well organized, that it is not difficult to manage the pupils under these circum-

stances. So far as the second situation is concerned, there are many advantages in staying at home; the first experience in holding a position away from home, especially a trying position, is very hard. Therefore, if the position is a good one, the teacher capable, and the home-life enjoyable, there is no reason why the beginner should not take the local school. She should never do it, though, merely for the sake of convenience or to satisfy her family, if by taking it her chances for success are lessened. Better be a success in a little one-room rural school than a failure anywhere.

How to apply. There are two ways to apply for a position: (1) by letter, and (2) in person. Usually both are necessary. In any case, the first step should be to make certain that there is a vacancy. If there is any doubt about the matter a letter of inquiry should be addressed to the appointing authority. It is unethical and unfair to apply for a definite position that is not known to be open. That the courtesy indicated by a letter of inquiry is appreciated and its lack deplored may be gathered from the following communication.

DEAR SIR,

Replying to your inquiry of the 6th instant, I beg to inform you that I shall remain here another year. Should I, however, desire to change, I shall notify you of such intention, for you are the only man who has inquired of me before putting in an application for the position. Already many applications for my own position have been turned over to me for reply. Naturally, I do not think much of the courtesy of such individuals, and, in fact, I do not think much of them as men.

Appreciating your courtesy in this matter, I am

Very truly yours

There is also no place for the type of letter which begins, "I understand you are going to have an opening in the —— grade of your school." It is perfectly proper to direct letters of inquiry to city, county, and state superintendents

relative to opportunities in their schools, and to request application blanks. A letter of inquiry is not an application, and should contain nothing but the request for information and application forms. The following will serve as an example:

VALLEY CITY, WASHINGTON
March 15, 1927

Mr. Frank D. Hanson
Superintendent of Schools
Shoshone, Washington

DEAR SIR:

Do you expect any openings for sixth-grade teachers in your schools the coming school year? If so, I shall be pleased to receive an application blank, and any other printed matter or information that I should have in order to present an application.

Very respectfully yours
(Miss) DOROTHY PERRY

The application. After a teacher has definite knowledge that a position which she would accept is to be open, it is proper for her to submit a letter of application. The letter should be carefully planned, and should be inspected by a second person for errors. It is not merely a vehicle of information; it is a portrayal of the teacher herself. It should be neat, logical, accurate, and brief. There is a good point in the story of the man who ended a long letter with the apology that he did not have time to write a short one. It does take a good deal of time to write a letter that is complete and yet tells no more than needs to be told.

The application should contain facts which can be easily verified. The teacher should not tell about her personal appearance, her ability to govern children, or her ability to teach. Matters of this sort should be left to those whose names she gives as references. Her own letter should contain the following types of information:

1. Personal facts: age, height, weight, and marital status.
2. Training: names of schools attended, dates, work completed, degrees or diplomas received, special courses, and kind of certificates.
3. Experience: amount, kind, place, and dates.
4. Special abilities and experience: art, dramatics, athletics, debate, journalism, music, scouting, and club work.
5. Special honors: leadership positions, awards, prizes.
6. References: names and addresses of teachers, school officers, and others who can certify to her abilities and character.

The following form will serve as an example of the proper letter of application:

VALLEY CITY, WASHINGTON
March 30, 1927

Mr. Frank D. Hanson
Superintendent of Schools
Shoshone, Washington

DEAR SIR,

In your letter of March 18th, you state that you have an opening in the sixth grade for the coming year. I wish to be considered an applicant for the position.

I was born at Dorchester, Idaho, in 1905. My height is five feet six inches; my weight is one hundred and twenty pounds. I am unmarried.

I completed my elementary school work at Dorchester, Idaho. Later attended the high school at Tabor, Idaho, for four years, and was graduated from there in June, 1924. I spent the next two years in Kennard College, completing the work of the lower division in 1926. During the school year 1926–27 I have been attending the state teachers college at Robley, and I expect to receive in June the certificate for intermediate work.

During my first year at Kennard College I was president of the Freshman class. During the past year I have been captain of the girls' basket ball team here and a member of the editorial staff of the school paper. While in high school I was a member of the Girl Scouts organization, played center on the basket ball team, and was a member of the dramatic society. I shall be willing to help in any way I can in managing the social activities of the school.

I have had no experience in teaching, except that which I had in

practice teaching and in a few days of substitute work in the Tabor elementary schools. I have enjoyed my practice teaching very much, received a good grade in it, and am led to believe that I can give satisfactory service.

If you are interested in my application, I shall be pleased to have you write to the following persons, who have given me permission to use their names as references:

Mr. Edwin R. Mansfield, Head of the Department of English, Kennard College, Kennard, Washington.

Mr. R. E. Chilcote, Director of Practice Teaching, State Teachers College, Robley, Washington.

Mr. Arthur A. Saunders, Head of the Department of Education, State Teachers College, Robley, Washington.

Trusting that my application may receive your favorable consideration, I am

Very respectfully yours
(Miss) Dorothy Perry

Enclosure:
Photograph

If an application blank has been received, it should be filled out neatly and returned promptly. Every item of information asked for should be supplied. No critical comments should be written on the application form. A letter of transmittal should accompany the application form when it is returned. It may contain all supplementary data not called for on the blank.

It is customary for an application to be accompanied by a photograph. To supply this need, the candidate should keep a few photographs of good quality on hand. Snapshots, groups, or pictures showing one in informal poses should not be used. The one sent should be recent, unmounted, attached to the application with a clip, and identified by the original's name and address on the back. It should not show the subject in evening dress, or wearing a hat. A front view is more satisfactory than a profile. A good photograph is just about as important as a good letter.

The personal application. Many superintendents insist

upon a personal interview with the candidate. In other cases, also, it may be desirable; that will depend upon the character and abilities of the appointing authorities and of the applicant. Some school-board members are so rough, discourteous, and tactless, some live in such remote places, and some are so hard to find that the task of interviewing them proves an ordeal. Some teachers, too, do not make a good first impression, although they may be adepts at letter writing. Some teachers are too timid to present their cases fairly in person. If the choice between personal and written application is left to the teacher, she should consider the probable results of each method. If she believes her case will be strengthened by making her application in person; if she has the ability to win instant favor; if she does not mind a little inconvenience — then she should apply in person.

It is hard to offer suggestions that will help one in a personal conference, because no two conferences are alike. When interviewing a school trustee, the teacher will usually have to take the initiative, she will volunteer much the same sort of information she would give in the written application. She may ask questions about the school — the building, the library, the length of term, and the pupils. She may also ask questions about the community — the occupations and the social activities of the people. If she is discreet, she may make a good impression by being interested in the work of the trustee.

The interview with a superintendent or a principal is far simpler; it is not a matter to cause much worry. He will try to make the teacher feel at ease; he wants her to make a good impression. She may safely anticipate that he will ask her for about the same information that she has already supplied on the application blank. This questioning will not be for the sake of getting the facts but in order to note her responses. It is a test of her adaptability, poise, and

self-control. It gives the superintendent or principal, as the case may be, an opportunity to note her voice, manner, vitality, interest, and attitude. The applicant should be at her best; she should act in a natural way and retain her composure; and she should not try too obviously to make a good impression. Above all things, she should not talk too much. In a recent book,[1] the following general rules are given for managing interviews of this kind:

1. Do not hesitate to ask a few questions about the school. Get him to talk about it. One of the complaints most frequently made is that teachers are not interested in teaching. It is a part of the task of the applicant to show she is interested.
2. Answer any questions that are asked briefly, clearly, and frankly. You do not have to show that you are a perfect teacher. Do not fear to admit your limitations when asked. On the other hand, you do not need to volunteer information concerning them.
3. Keep a practical outlook throughout. Do not profess an enthusiasm you do not feel, and do not gush about the children and the opportunity in the teaching profession. At the same time, do not be over-dignified.
4. Do not complain about conditions in the last school in which you taught, or about anything else.
5. Do not be late for your appointment, and do not prolong the interview after the interviewer has finished his questions.
6. Keep good-natured, even if you find you have missed the train, or if the questions you are asked and the comments which are made seem trivial. Spontaneity and good humor are nearly always evaluated favorably.

The salary question. A confusing question that is sometimes asked an applicant is, "How much salary do you expect?" It is confusing because if the applicant sets the price too high she is considered unreasonable and perhaps loses her chance for appointment; if she puts it too low, she does an injustice to herself and to other teachers. This

[1] J. C. Almack and A. R. Lang: *Problems of the Teaching Profession*, p. 47.

question doubtless has the effect of causing some underbidding among applicants, and so tends to keep down salaries. Educators have often remarked that one of the reasons why many teachers are poorly paid is because they do not know what they are worth.

If the school operates under a salary schedule, the applicant's reply to this question should be, "I expect what is paid under the regular schedule"; if it does not operate that way, the applicant should answer, "I will accept the regular salary," meaning what has been paid in the past. Even before applying, it is advisable to inquire of some competent person what the position pays, or should pay. The county superintendent should be able to give the necessary information. If, however, the candidate is pressed to make a definite answer in dollars, the following procedure will help her in making her estimate: Calculate the cost of board and lodging in the community for twelve months, and double the amount. This gives the lowest salary any one should accept. For the desirable salary, add at least fifty dollars for every year of experience, and enough to pay interest at five per cent on the cost of one's schooling above high school.

Letters of recommendation. Letters of recommendation are an important part of the teacher's capital. They are written, by persons who know the applicant's qualifications, directly to school authorities and to appointment bureaus. Such letters are strictly confidential, and are never intended to come into the hands of the person about whom they are written. Ordinarily, the teacher should ask for permission before using any one's name as a reference. Sometimes the nature of the response to the request will give her an idea of the kind of recommendation that will be written. If the reply does not seem favorable, or if no reply at all is made, it may be better, in the future, to omit the individual's name

from the list of references. One should not hesitate to ask professional friends for recommendations, for it is a part of their professional duty to give them when it is possible to do so.

The names used as references should be carefully chosen. They should usually be those of educators or school authorities. The persons should be competent to speak intelligently concerning the teacher's qualifications. It is better not to put home politicians, pastors, relatives, and friends of the family on the list. It probably hurts the teacher's chances to submit too long a list, particularly if names of people are included who are not prepared to speak with authority and knowledge as to her abilities. Three or four names will suffice. Beginners will usually have to depend upon their superintendents, principals, and teachers for their first positions.

One should never ask for an open letter of recommendation. This means a letter that is addressed "To whom it may concern," and is given to the applicant to read. Only ignorant and credulous school officials pay any attention to such letters. The reason why they are not acceptable is because they are unreliable. No one is likely to say other than complimentary things about a person who is going to read what he says. This kind of letter will puff up the subjects of the remarks for a few days, until the thought comes that they are in reality only a coarse type of flattery. Many persons refuse to write this type of recommendations; and asking for such a letter may cause much embarrassment. The use of open letters, moreover, may reduce one's chances of appointment.

The better school systems now send out regular blank forms to the addresses given as references. On these forms are listed certain items on which opinions are wanted: usually such items as moral character, scholarship, ability

to teach, ability to discipline, professional interest, loyalty, coöperation, personal appearance, and personality. The teacher's chances of appointment and promotion depend almost entirely upon the estimate made of her by those who know her. The applicant cannot afford, therefore, not to be at her best at all times. The teacher should endeavor always to make a good impression, for it is by these repeated impressions that she will be evaluated when the occasion arises. It is wise to make a favorable first impression; it is wiser to make a continuous good impression.

Etiquette of professional correspondence. The conventional forms required by good breeding should be rigidly observed in professional life. The first requirement in correspondence is a good grade of writing materials. Letters of inquiry or of application should not be written on notebook paper, social correspondence paper, or cards. Colored, embossed, or fancy stationery of any kind is out of place in business writing. Responses to letters should be marked by promptness, and all communications by brevity and clarity.

A self-addressed stamped envelope should accompany any business letter which asks a favor and requires a reply. This matter amounts to only two cents to the individual teacher; with numbers of teachers involved, it might easily run up, in a large school system, to several hundred dollars. To be sure, many people do not begrudge the small sum that it takes to comply with a single request, yet many at the same time take note of the oversight. Any one seeking favors should plan to inconvenience the other party as little as possible. School officials are generally impressed by the person who is thoughtful in matters of this kind. A business-like letter, an enclosed stamped envelope, and a little note of thanks after a favor, are wise investments.

Appointment bureaus. Appointment bureaus render a valuable service in bringing teacher and position together;

they are no less useful in collecting and preserving letters of recommendation. These agencies are of two types: (1) institutional, and (2) commercial. The institutional agencies are connected with normal schools, colleges, state educational associations, and state departments of education. Commercial agencies are run by private parties for profit, and they charge for placement approximately five per cent of the first year's salary. Institutional bureaus usually charge a fee of from one to three dollars for postage, typing, and other expenses, though a few do not make this charge. Before using commercial agencies, it is best to get the advice of the county superintendent or of some other responsible person.

The general purpose of the appointment bureau is to give the appointing authorities and the teacher knowledge of each other. After that, it leaves them to work out their own arrangements. Its success lies in giving satisfactory service to both employer and employee, and the reputation of a school rests to a large degree upon the efficiency of this office. The more progressive bureaus are obtaining facts for teachers concerning the desirability of positions, are following up beginners for two or three years, and are assisting teachers who are having difficulties. Every teacher should have her credentials collected in some appointment bureau, even though she may not at present feel the need of its assistance in getting a position. The point is that they will be ready when the need arises.

The teacher's relations with the bureau should be as happy as possible. She should try to make as good an impression on its officers and employees as she hopes to make on the employing officials. Requests for personal information should be supplied promptly, and immediate attention should be given to notices of vacancies. Complete information on training, experience, and references should be

supplied. The teacher has a chance here to practice the personality-traits mentioned in the preceding chapter, and her behavior will be taken as a measure of her promise as a prospective teacher. The relations she maintains with the appointment bureau will doubtless determine her success in obtaining a position.

The contract. The last step is the contract. An offer of a position by an appointing authority and its acceptance by the teacher constitute a contract, whether oral or written. Frequently this contract consists of a letter, a telegram, or a telephone message on the one hand, and a written or oral acceptance on the other. After the preliminary agreement, a written contract is filled out in triplicate and signed by the school authorities and the teacher; one copy is placed on file in the office of the county superintendent of schools. The common legal form of contract specifies that for a given number of months the teacher is to teach certain subjects or grades and perform such other duties as may be designated by the proper authority, in return for which the school agrees to pay a salary of fixed amount at fixed dates. Some school boards write in extra provisions requiring the teacher not to dance, or to live in the community, or not to get married during the term of her contract. If the first two provisions are insisted upon it is best to accept them without their being written into the contract; the third provision is probably not legally binding. At all events, it is not worth while to refuse to sign a contract because it contains these clauses.

After accepting a position, the teacher should at once withdraw the applications she has made elsewhere. She should then keep loyally to the terms of her agreement. In some States teachers have the right under the law to resign after giving thirty days' notice; in other States they run the risk of forfeiting their certificates if they resign with-

out the consent of the school board that appointed them. If circumstances arise which make the teacher feel that she ought to resign, she should take the matter up with the proper official, give her reasons in detail, and ask for an honorable release. If the school authorities cannot see their way clear to release her, she should then fulfill her agreement. It is bad business to "jump a contract." Most school officials are reasonable, and will be fair if they are frankly and honestly dealt with. It is only rarely that a teacher finds it to her advantage to be released from an agreement. The successful teacher, after making a decision, settles down to work and forgets other possibilities.

Summary. One of the vital problems of the teacher is to obtain a position. The first step in that direction is to secure a certificate. There are two methods of doing this: (1) the examination, and (2) the training course. The second step is to find out who is the appointing authority, and, after learning that there is a vacancy, make an application for it. In that document should be given a complete record of the important items in the teacher's equipment. A personal application often supplements, and occasionally takes the place of, the written application. An interview should be planned for in advance, and the applicant should try to make a good impression. References should be well selected and consciously planned for by judiciously paving the way. The etiquette of business correspondence should be rigidly observed in all written communication with officials and references. Appointment bureaus are indispensable in bringing teachers and positions together. After a contract is once made it should be kept inviolable, unless it is dissolved by mutual and cordial agreement.

EXERCISES AND PROBLEMS

1. Why cannot the beginning teacher afford to be over-particular regarding the type of position she will accept? Why, on the other hand, should she refuse the first opening that comes her way if it does not suit her?
2. What different kinds of certificates for teaching are issued in your State? Arrange them in the relative order of their value.
3. List the advantages and the disadvantages of using the appointment bureau of your teacher-training school; of using a commercial agency.
4. What, in your opinion, are the merits and demerits of the use of photographs in selecting teachers?
5. Why are the "To whom it may concern" letters of recommendation presented by the teacher valueless?
6. What are the advantages and disadvantages of personal interviews as a means of selecting teachers?
7. List the advantages and disadvantages of a beginning teacher obtaining a position in her home town.
8. Assume that there is an opening in a rural school which you would like to have. Plan your procedure for getting it. Do the same for a position in a city school system.
9. Calculate "the cost of living for twelve months, doubled," as a salary basis for the community in which you live, and compare it with the salary schedule in force.

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PART II

ORGANIZATION AND MANAGEMENT DUTIES

CHAPTER IV

PREPARING FOR THE OPENING DAY

Preliminary duties. Every one is familiar with the adages, "Well begun is half done" and "A good beginning makes a good ending." Nowhere do they apply with more force than to teaching. With supplies, textbooks, assignments, and plans ready in advance; with an understanding of everything that is to be done, and with possible difficulties anticipated, teacher and children begin school smoothly and a big victory has been gained. The teacher is able to focus her attention upon the two big tasks of the day — namely, putting the children to work and getting control over them. If she is not ready, and if she gets confused, the pupils take advantage of the situation and chaos is the probable result. Visitors are usually present, and a good impression should be made upon them as to order and business-like efficiency. For this occasion the Boy Scout motto, "Be prepared," should be adopted.

Two main divisions of this preparatory work may be made. The first includes what may be done before going into the community; the second what to do soon after reaching the community. Each of these main divisions falls into the following subdivisions that invite special attention, as follows:

I. What to do before going into the community
   1. Study the school
   2. Study the community
II. What to do after reaching the community
   3. Get suitable living quarters.
   4. Study the pupils
   5. Inspect the school and equipment

6. Make preliminary visits
7. Prepare a temporary program
8. Prepare teaching plans

1. Studying the school. Certain printed materials concerning the school may be had before the opening day. If the position is in a city the course of study, the rules and regulations, a list of the textbooks, and the instructions to teachers can be obtained by writing to the city superintendent of schools. If the position is in a rural school, the first two items are available from the county superintendent. The course of study tells where the work of each grade starts in the textbooks, and it may suggest supplementary materials and even outlines of model lessons. The teacher should learn the general nature of the work of the grades she is to teach and should also have some understanding of what immediately precedes and follows that work. A course of study before us contains, for each grade and each subject, (1) a list of activities, (2) a statement of outcomes, (3) a model lesson, (4) a list of devices, (5) and suggested books for teacher and for pupils. The same course contains complete primary plans for:

1. Recreational reading
2. Making a collection of postage stamps
3. Telling of things seen on the way to school
4. Playing a game with stories
5. Making a circus
6. Making playhouses
7. Observing "Discovery Day"
8. Making a motion picture
9. Entertaining the mothers
10. Making a garden
11. Giving an entertainment
12. Listening to music

Rules and regulations prescribe the duties of the teacher. They tell when school opens and closes, and what days are

set aside for holidays. They give the rules of discipline and order, and tell when to make reports, and how to take care of playground management, fire drills, registers, plan-books, and meetings. It is especially necessary for the city teacher to follow implicitly the prescribed routine and practice. Many of the regulations are explained at the first teachers' meeting. The rural teacher has more freedom, but she must comply with the law and with any supplementary rules set down by the state or the county superintendent. One of the first things to do is to look for these rules in the school register.

2. Studying the community. In studying the community, a map is desirable; sometimes this may be obtained from the chamber of commerce. An automobile road map may help the teacher to get her bearings and make her feel acquainted with different locations. County and large city maps are on sale at bookstores, and the county superintendent can occasionally furnish district maps. The next source of information is the local paper; a subscription to that is a wise investment. From its columns can be learned people's names, neighborhood leaders' names, community happenings and special points of interest and pride, and the nature of the local industries. Rural teachers often act as correspondents for the county paper. This is good experience, and it gives the writer quite a little prestige or at any rate a distinct feeling of personal satisfaction. It makes a good impression to be acquainted with local conditions when a newcomer in a school district.

3. Suitable living quarters. The most important undertaking is to find a good boarding-place. They are usually few and far between in rural districts; and even in cities desirable living quarters are hard to find. It is seldom wise to make arrangements by correspondence; a much better plan is to wait until the community has become familiar.

Although it is ordinarily unwise to live at a hotel permanently, there is no harm in doing it for a few days while looking around. It is also possible to live at a considerable distance from the school for a week or so, and drive back and forth. Finally, though, a home should be found in the community; many school boards insist upon this as a condition of employment. The most important points to keep in mind in selecting a boarding-place are:

1. *Convenience.* This means that the place should be within ten or fifteen minutes' walking distance of the schoolhouse, or so near to dependable means of transportation that not more than a half-hour need be spent on the road.
2. *Comfort and health.* An attractive, well-lighted, and well-heated room and a variety of good, wholesome food are essential to one's happiness and efficiency. A clean and quiet environment, also, is indispensable.
3. *Privacy.* The teacher's room should be free from intrusion at all times. She should not have to share her room with children, nor, as a rule, is it wise for her to room with another teacher.
4. *Freedom.* The teacher should be perfectly free to come and go as she pleases. She should not be accountable to any one, and should not be spied upon and interfered with by her landlady.
5. *Good companionship.* Loneliness has to be endured to some extent by every teacher, but it is a great advantage to her to have cheerful, congenial, and sympathetic associations in her boarding-place. Being among refined people will mean happiness and encouragement and will increase her efficiency.

There are two or three mistakes to be avoided. One is the mistake of failing to start out with the right amount of privacy. The teacher should let the family in which she boards know from the first that she has work to do in her room, for it will be harder to prevent intrusion after the acquaintance is well under way. If she starts in by being decidedly informal, any changes thereafter will be misin-

terpreted and resented. Secondly, the teacher should make it a rule not to discuss the school, the neighbors, or fellow teachers with the landlady, unless, of course, her remarks are complimentary and not likely to be misconstrued. It is well to bear constantly in mind the moral in this verse:

> A wise old owl lived in an oak,
> The more he heard the less he spoke;
> The less he spoke the more he heard —
> Why can't we be like that wise old bird?

The third consideration is: unless conditions are intolerable, the boarding-place should not be changed on the whim of a moment or because a more attractive proposition is offered. Choosing a boarding-place is a good deal like partnership and marriage: it is for better and for worse and the arrangement can seldom be broken up without making enmity.

Cost of room and board. The question naturally arises as to how much room and board should cost. This depends to a large degree upon the salary received, the cost of other items in the budget, and individual tastes. A good rule is not to pay more than one half of the annual salary for twelve months' room and board. Some additional guidance can be obtained from figures collected by the National Education Association, for 1920, for three hundred and sixty cities.[1] See Table III.

4. **Studying the pupils.** Some facts can be learned in advance concerning the pupils. In the register kept by the teacher of the preceding year can be found their names, ages, grades, scholarship, attendance, and a list of promotions. The number of pupils in each class, and the names of those who are over-age may also be seen. Many teachers leave for their successors the plan-book which they have

[1] *Proceedings*, vol. 48, p. 594.

TABLE III. ANNUAL AMOUNTS SPENT FOR ROOM AND BOARD BY ELEMENTARY TEACHERS

(Adapted from data in *N.E.A. Proceedings*, 1920, p. 594)

SIZE OF CITY	ONE FOURTH SPENT LESS, AND THREE FOURTHS SPENT MORE, THAN:	ONE HALF SPENT LESS, AND ONE HALF SPENT MORE, THAN:	THREE FOURTHS SPENT LESS, AND ONE FOURTH SPENT MORE, THAN:
More than 100,000.....	$460	$500	$540
50,000 to 100,000.....	471	513	540
25,000 to 50,000.....	395	433	515
10,000 to 25,000.....	388	440	511
5,000 to 10,000.....	383	414	483
Less than 5,000.....	361	402	459
Average.....	375	426	494

used, a statement of the pages where work ended in each text, mental-tests and achievement scores, and suggestions as to discipline, child health, and related matters. If the school has a principal or supervisors, intimate facts about the home life, interests, conduct, and needs of the various children may be obtained from them. All this information is valuable if it is used rightly, but none of it should be allowed to awaken prejudices against any one. A child is entitled to a new deal at the commencement of the new school year no matter what his past record has been. Nevertheless, there is no reason why the teacher should not be on her guard.

5. **Inspection of the school and equipment.** While visiting the school to examine the records, the teacher should make a thorough inspection of the schoolroom and equipment. In the city school, most of the work of getting everything in readiness will be looked after by the janitor; the teacher's visit is chiefly to become familiar with the location of her room, to decide upon a method of getting the pupils out of the room at dismissals and fire drills, and to

note any deficiencies in conditions or arrangement. She should note what maps, charts, globes, and books are on hand. She should inquire about textbooks; if they are furnished by the district, she should know how they are distributed. She should know what supplies are furnished, and make sure that crayons and erasers will be ready the first day. Anything the new teacher can do to give the room a more cheerful aspect for the first day — by putting in pictures, flowers, plants, or curtains for example — will be so much to her credit.

The rural teacher will have everything to look after. The schoolhouse may need repairs; and it is almost certain to need cleaning. Perhaps the school yard, also, will need cleaning. There are broken windows to replace, heating and ventilating arrangements to examine, shades to put in order, and playground equipment to repair. Drinking and toilet facilities should be carefully checked. Desks may be broken, the clock may refuse to run and supplies may not have been ordered. If this visit of inspection can be made with the president of the school board, or with the clerk, it is more likely that steps will be taken to put things in working order. The teacher may expect, however, to have to do many things herself. It will be a good thing if she knows how to use simple tools, apply paint, sweep, scrub, and dust. The older pupils will help, and a working bee may be planned for the Saturday before or after school opens. If the board members have been accustomed to letting the building run down, it is hardly probable that the teacher can get them to do much. Nevertheless, she should make her requests and, in the meantime, do as much as she can with the help of the pupils and of the parent-teacher association.

Texts and supplies. There are schools that furnish all the books and supplies that the pupils use. Where this is

the practice, the teacher should see that everything is on hand and ready for immediate distribution. She will need to keep a check on the amounts used, and to try to instill in the children respect for property. In a rural school taught by one of the authors of this book, the pupils had become very extravagant in their use of writing paper, which was furnished by the district. Pending the time when an entirely different attitude could be built up, they were required to keep all the sheets which they received and submit them later for inspection. If the pupils buy their own books, pencils, and paper, a list of what each is expected to have should be written on the board. While the teacher should not be called upon to spend her own money for school supplies, it is often the part of wisdom for her to have some extra pencils, some tablets, a few books, and a number of crayons and erasers in a private supply for first-day emergencies.

School boards are often willing to supply equipment when they know what is needed. If the occasion is favorable, articles needed should be listed by the teacher and turned over to the clerk for purchase. As a minimum, every classroom should have the following:

Bookcase	Phonograph	Visitors' chairs
Bulletin board	Pictures	Window shades
Clock	Pointers	Hectograph
Dictionary	Sand table	Bell
Flag	Teacher's chair	Paper towels
Globe	Teacher's desk	Cleaning equipment
Maps	Thermometer	Washing facilities

6. Preliminary meetings. In city schools, a preliminary meeting is usually called in the schoolhouse for the Friday afternoon before school begins. At this conference the principal gives instructions for the first day. They cover

classification and enrollment, hours of dismissal, marching, and related matters. The teachers are introduced to one another, and the rooms are opened for inspection. In the larger cities, Saturday forenoon is usually given to a general meeting, addressed by the superintendent. These are such busy days that the teacher is not able to bring any of her personal affairs to the attention of the officials. The best she can do is to keep wakeful and watchful and let any questions that she may have wait till a later date.

In rural schools it is usually well for the teacher to call upon the trustees, or at least upon the chairman of the board, a few days before the beginning of school. If there is any business to be attended to, it may be made the object of the visit. If not, she can always ask whether there are any suggestions to be made as to the organization or management of the school. There is much to be learned from school-board members, and it is very necessary to keep their support and increase their interest in the school. One of the ways to do these things is to maintain a friendly attitude toward them, consult and counsel with them, and listen to their advice.

7. The daily program. As soon as preliminary inspection is finished, attention should be given to preparing the daily program. If the program used the preceding year is available, it should be used as the basis for planning the new one. In this way nothing will be left out, and the order of studies to which the pupils have been accustomed will be retained. While the first new program may be altered several times during the first week, it should be as nearly as possible in its final form when prepared. Some of the principles to follow in the undertaking are as follows:

1. The program must be confined to the number of hours in the school day.
2. It must include all the subjects required to be taught.

3. It must agree with the amount of time assigned for the various subjects in the different grades.
4. It must be in harmony with the course of study.
5. It must fit the school — that is, be adapted to the number of grades and subjects taught by the teacher.
6. It should include periods for study and project work as well as recitation periods.
7. It should give attention to having the proper sequence of subjects. This implies such measures as putting the most difficult subjects in the most favorable periods, avoiding placing penmanship and drawing after physical education or recess, and obtaining variety.
8. The study period should follow immediately after the recitation and assignment.
9. The length of the periods should be adjusted to the age and needs of the pupils and to the nature and difficulty of the subject-matter. The younger pupils should be assigned shorter periods; more difficult subjects should be given longer periods.
10. Play and recreation exercises should be provided for.
11. A special time should be set aside for helping individual pupils.
12. Home study should be avoided as much as possible.
13. The program as arranged should be displayed before the pupils on the board or on a large poster.
14. After the pupils have become accustomed to the program, few changes should be made.

Time allotments. One of the most important decisions in program-making concerns the distribution of time among the various subjects. Teachers make a mistake in giving the subject they like the best the most time; they should not neglect any subject because they do not like to teach it. The time set aside for any subject should not be unduly extended just because pupils are having difficulty. Up to a certain limit, improvement in a subject does not take place in proportion to the amount of time spent upon it. If children are not getting along well in arithmetic the remedy is not necessarily to lengthen the arithmetic study and recitation period. The best thing to do is to improve

the methods of teaching and supply sufficient incentives to effort. In general, ten- to fifteen-minute periods are sufficient for primary children: twenty- to thirty-minute periods for upper-grade pupils. As a guide to distribution by grades the following table is included. The teacher should note that the allotments are for a week. Thus it is the practice to teach language in the first grade one hundred and thirty minutes a week. This is twenty-six minutes a day.[1]

TABLE IV. AVERAGE NUMBER OF MINUTES PER WEEK ALLOTTED TO ELEMENTARY SUBJECTS, IN FORTY-NINE LARGE CITIES

SUBJECTS	GRADES								Totals
	I	II	III	IV	V	VI	VII	VIII	
Language	130	141	167	176	187	194	207	215	1417
Reading	421	404	332	245	182	141	142	136	2003
Spelling	39	82	87	85	82	78	72	73	598
Penmanship	67	72	77	78	77	75	63	58	567
Arithmetic	64	143	193	206	211	211	212	211	1451
History	17	19	30	54	84	97	148	167	616
Civics	9	12	11	12	14	15	23	27	123
Geography	11	14	59	137	156	162	137	84	760
Science	22	23	23	23	21	21	22	26	181
Hygiene	16	16	18	22	27	27	25	22	173
Physical training	90	87	89	90	90	89	98	104	737
Supervised play	22	19	18	14	16	16	16	15	136
Recess	105	106	106	96	91	90	84	74	752
Industrial arts	22	22	25	30	50	65	90	106	410
Drawing	87	88	87	86	82	75	77	79	661
Music	71	74	74	77	76	74	70	75	591
Miscellaneous	97	93	99	97	99	98	88	87	758

The rural-school program. The rural-school program is more difficult to prepare than the city-school program. Many grades and many subjects must be taught in a day of five or six hours. Some teachers try to hear as many as

[1] F. C. Ayer: *City School Leaflet*, no. 19, p. 2, United States Bureau of Education. (February, 1925.)

thirty to thirty-five recitations from nine o'clock to four. The average recitation is then only about ten minutes long. When allowance is made for calling classes and dismissing them, making assignments, and looking after routine, it will be seen that there is scarcely any time left for other teaching activities. The resulting confusion and hurry cause disorder, exhaust the teacher, and prevent concentrated effort on the part of the pupils. No teacher should try to handle more than twenty-four recitations a day; sixteen is a better number.

There are two effective ways of cutting down the number of recitations: combination of classes, and alternation of subjects. To illustrate, all the children may be taught music at the same period; that plan may also be followed with penmanship and drawing. Two classes in arithmetic may recite at the same time, one working at the board, the other at seats. In spelling, words may be pronounced first to one group and then to another. Alternation may be provided by teaching history three days a week, and civics, at the same period, the two other days. Hygiene may alternate daily with geography or with science. Arithmetic may be taught in the eighth-grade thirty minutes daily for a half-year, instead of fifteen minutes daily for a year, language not being given at all; at the end of the half-year arithmetic is dropped, and language takes its place.

Yearly alternation is the plan most widely used, especially in the States of Missouri and Illinois. The first and second grades are taught every year, but the third is combined with the fourth, the fifth with the sixth, and the seventh with the eighth. The next year, only the third, fifth, and seventh grades would be taught, except of course the first and second, which are not alternated. By this plan, only half as many recitations are required for the six upper grades, and the time allotment may be doubled. The textbooks

should be checked over and all unnecessary material eliminated. In arithmetic, for example, little-used and over-difficult matter should not be taught at all; in language, most of the formal grammar can be dropped without loss. When so little time is available, it seems a mistake to give any of it to obsolete and non-essential content.

A typical rural program. The following program illustrates the proper order of subjects, distribution of time, and combination and alternation of studies. In carrying out such a program, a few of the recitations should become supervised study periods, especially at the opening of the year or when taking up a new subject. The old-fashioned rough-and-tumble recesses have been dispensed with, and supervised play substituted in their stead. Manual training and domestic science may be taken up by the older pupils at the noon intermission. The program includes:

TABLE V. DAILY PROGRAM FOR RURAL SCHOOLS

CLASS	STUDY, OCCUPATIONS, AND PROJECTS				
TIME RECITATIONS 1 (Beginners)	2 (2d grade)	3 (3d and 4th)	5 (5th and 6th)	6 (7th and 8th)	
9:00 Opening	Story telling, current events, dramatics, etc.				
9:10 1 Reading		Reading	Arithmetic	Arithmetic	Arithmetic
9:20 2 Reading	Seat work		Arithmetic	Arithmetic	Arithmetic
9:30 3 Arithmetic	Blackboard	Reading		Reading	Reading
9:40 4 Arithmetic	Play	Play	Language		Reading
9:55 5 Arithmetic	Seat work	Seat work	Reading	Reading	
10:15 3 Language	Drawing	Drawing		Language	Language
10:25	Supervised play				
10:40 1 and 2 Phonics			History	History	Language
10:50 4 Language	Word drill	Word drill	History		History
11:10 5 History	Pictures	Library	Library	Library	
11:30 3 Reading	Sand table	Blackboard		Library	History
11:40 Penmanship, drawing, and music					
12:00	Noon intermission				
1:00 1 Reading		Reading	Reading	Hand work	Library
1:10 2 Reading	Sentences		Reading	Hand work	Library
1:20 4 Geography	Play	Play	Hand work		Hand work
1:40 3 Geography	Blackboard	Sentences		Geography	Hand work
1:55 5 Science	Hand work	Hand work	Geography	Geography	
2:20 3–4 Spelling	Library	Library			Science
2:30	Supervised play				
2:45 1–4 Literature, history, nature study, geography				Spelling	Hygiene
3:00 4 History	Sand table	Library	Geography		Hygiene
3:15 5 Language	Drawing	Hand work	Spelling	History	
3:35 1–4 Hygiene				Language	Language
3:45 5–8 Hygiene	Play or dismissal	Hand work			
4:00		Dismissal			

The city-school program. Two types of programs are found in city schools: the classroom type and the departmentalized type. The teacher will be wholly responsible for the preparation of the first; the principal will usually prepare the second. The former concerns us here. Two copies should be made, one for the classroom and one to be handed to the principal. A form that will fit equally well any grade from the third to the eighth is given but the time allotments should be modified to fit the grade. As planned it assumes one grade only in the room, and the time allotment takes care of both study and recitation. If there are two classes or an A and a B section in the room, the time should be divided about equally between them, one studying while the other recites.

TABLE VI. DAILY PROGRAM FOR SIXTH GRADE

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00	Study	Opening	Study	Opening	Study
9:00	Arithmetic	Arithmetic	Arithmetic	Arithmetic	Arithmetic
9:50	Penmanship	Spelling	Penmanship	Spelling	Penmanship
10:15	Reading	Library	Reading	Library	Reading
10:40	Play	Play	Play	Play	Play
10:55	Language	Language	Language	Language	Language
11:35	Hygiene	Literature	Hygiene	Literature	Hygiene
12:00	Noon intermission				
1:00	Social	Social	Social	Social	Social
1:10	Geography	Science	Geography	Science	Geography
1:50	Art	Hand work	Art	Hand-work	Art
2:15	Physical education				
2:30	History	Civics	History	Civics	History
3:10	Industrial arts	Industrial arts	Industrial arts	Industrial arts	Industrial arts
3:40			Dismissal		

8. Lesson plans. The final step in getting ready for the first day is to plan the lessons and other activities.

Since the whole week will be a busy one, it is well to include every day of it in the preliminary arrangements. A week's experience with work that was planned ahead also has the value of convincing the teacher that planning should be made a permanent practice. These plans insure one's making preparation in advance and being familiar with what is to be taught. They prove a guide for a substitute if the regular teacher has to be absent, and afterward they give a good record as to which types of lessons can be taught successfully and which ones are likely to result in failure. A collection of good lesson plans is an excellent foundation on which to build future success.

Lesson plans are of two kinds, the daily lesson type, and the weekly assignment type. The daily plan is a detailed statement of the purpose, procedure, and application of the recitation activities. The weekly plan is a more general statement of aims, topics and problems, references, motivation, and time allotment. Inasmuch as the teacher has a limited amount of time for planning after she begins teaching, most of the plans that she makes must be of the weekly assignment type. In training for teaching, though, she should practice making daily plans. Then, when she takes up her work, she will have the best form or procedure so well in mind that her teaching will be thorough, systematic, and in accord with the laws of learning. Weekly planning may be looked upon as an essential part of her preparation so long as she continues in the teaching profession.

The daily plan. Daily plans vary with the age and ability of the pupils, the subject and topic being taught, and the ability and experience of the teacher. As a minimum, a plan should include: (1) aims, (2) materials, and (3) procedure. Aims are of two kinds: (1) those of the teacher, which may also be called the social aims, and (2) those of the pupils. Materials include the assignment in the text, the

references, and any supplies and equipment which may be required. Procedure includes in time order what the teacher is to do, and often suggests the response which the pupils are expected to make. Many teachers place at the top of the page on which the outline plan is written, the subject of the lesson under the title "Unit of Instruction."

Herbart and his followers developed a formal lesson plan of five steps. In actual practice, one or more of the steps may be omitted from many lessons, and the amount of time given to any step while teaching from the plan may be expected to vary under different conditions, such as different pupils, subjects, and aims. In the illustrative plans which are given in succeeding chapters, in connection with the teaching of the various branches, only the simpler forms of plans will be given, but at this time the five formal steps may be briefly described because of the light they throw upon the teaching process. It is advisable for the teacher in training to prepare enough plans of her own to make it easy for her to remember and to apply the leading principles.

The five formal steps are:

1. *Preparation.* The development of readiness for the new work. This includes the calling up of past experiences which are related to the new lesson, and the arousing of motive, interest, and attention. Review and assignment have a part in this process. (See pages 229, and 242.)
2. *Presentation.* The main feature of teaching procedure. It involves teaching as clearly, vividly, and economically as possible, the new facts, skills, and ideals.
3. *Comparison.* Showing and developing the relation of the new materials and experiences to known facts and skills.
4. *Generalization.* Deriving from the new facts and materials which have been taught any conclusions, principles,

and laws which are thereby justified, and stating them.

5. *Application.* Using repeatedly, in situations meaningful to the children, the new facts, skills, ideals, and principles. Every effort should be put forth to make the whole procedure satisfying in the highest degree to the children.

The weekly plan. As has been said, the weekly plan is little more than a record of aims, assignments, references, illustrative materials, and time allotments. In some school systems, teachers are furnished with convenient blank forms on which to write their weekly plans. If blanks are not supplied, it is a simple thing for the teacher to make her own forms. To make a form, rule a large sheet of paper into six columns and then, with transverse lines, into rectangles. Write the days of the week in their order at the top of the five vertical columns to the right. In the first column of all put down the various activities which constitute the teaching procedure and the points which demand special attention, and for each of these classifications enter the various plans under the respective days. The form shown in Table VII will illustrate what has been described.

Checking preparations. In order that nothing shall be forgotten, a check list of important preliminary duties should be prepared; each task, as it is attended to, is checked off. A list of many of the common items is given below by way of illustrations. Methods of taking care of some of these responsibilities have already been presented, and others will be discussed in the pages which follow.

1. Preliminary work done by the teacher:
   a. Examining the course of study
   b. Reading the rules and regulations
   c. Studying the community
   d. Inspecting the schoolroom
2. Best procedures worked out for:

a. Passing in and out of the room
b. Passing in and out of the building
c. Collecting and distributing wraps
d. Collecting and distributing books, paper, etc.
e. Going to the toilets
f. Getting drinks of water
g. Using library and reference books

3. Supplies ready for all the pupils:
   a. Crayon and erasers
   b. Sharpened pencils
   c. Paper
   d. Enrollment slips
   e. Seat work
4. Miscellaneous and general preparations made:
   a. List of pupils expected to enroll
   b. Assignments for each class on the board or on slips.
   c. Program on the board
   d. Seating plat ready for names
   e. Game plans for intermissions
   f. Lesson plans for the day and week
   g. List of books, magazines and supplementary reading on hand

Summary. The beginning teacher should make complete and careful preparations for the first day. Before going into the community she should find out all that she can about the school and the community. She should by all means get copies of the course of study and the rules and regulations of the school, and read them thoroughly. A few days before the opening of school, she should go into the community and attend to such other preliminary duties as finding a boarding-place, studying the pupils, inspecting the schoolhouse, making calls, going to teachers' meetings, making daily program, and planning the work for the first week. School records such as the register, the daily program, and the plan book used by the teacher of the preceding year will prove fruitful sources of information. Any necessary school supplies, equipment, and books should be

TABLE VII. A WEEKLY PLAN SHEET

Subject..... Grade..... Week ending..... 192 .

ACTIVITIES	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1. Assignment a. Pages in text					
b. Pages in references					
c. Illustrative materials					
2. Material to be reviewed					
3. New material — actual outline of subject-matter					
4. Teacher's aim					
5. Pupils' aim					
6. Time allotment for 1–5					
7. Teaching procedure a. Preparation					
b. Motivation					
8. Time allotment for 7					
9. Teaching procedure a. Presentation, etc.					
10 Time allotment for 9					

obtained in advance of the opening day. Complete readiness for the first day always makes for success and should never be neglected.

EXERCISES AND PROBLEMS

1. List all the things you think a teacher should do in preparing for the first day of school.
2. Give the advantages which come from obtaining as much advance information as possible regarding the school and the community.
3. Why is it a grave mistake for the teacher to arrive in the community just in time for the opening day?
4. Show how a teacher's rooming- and boarding-place may influence the quality of her teaching.
5. Prepare a checking list for use in inspecting school buildings.
6. Prepare a list of necessary supplies and teaching equipment.
7. Explain the value of a careful study of the school records and reports, the regulations, and the course of study.
8. Point out any influences which the daily school program may have upon school discipline.
9. List the characteristics of a good daily program.
10. Give arguments for and against daily plan-making.
11. Prepare a form for a plan book which you think would be useful, and explain why you think so.
12. Show the importance of a preliminary study of the community in enabling a teacher to make a good impression on her arrival, and the importance of this first impression.

SELECTED REFERENCES

Almack, J. C., and Bursch, J. F.: *The Administration of Consolidated and Village Schools*, chap. XI.
Bagley, W. C.: *Classroom Management*, chaps. II, IV.
Barnes, I. G.: *Rural School Management*, chaps. IV, IX.
Bennett, H. E.: *School Efficiency*, chaps. XVII, XVIII.
Cubberley, E. P.: *The Principal and his School*, chaps. IV, IX.
Culter, H. M., and Stone, J. M.: *The Rural School*, chaps. VII, VIII.
Sears, J. B.: *Classroom Organization and Control*, chap. XII.
Wilkinson, W. A.: *Rural School Management*, chaps. VIII, IX.
Woofter, T. J.: *Teaching in Rural Schools*, chap. IV.

CHAPTER V

THE FIRST DAY OF SCHOOL

Importance of the first day. Those who have read *Jean Mitchell's School* will recall how she succeeded where others failed. Her success on "that hard first day" largely determined the character of the year's work. The first day is a critical one. Pupils are speculating on what the new teacher will be like, and she has also been a topic of conversation among the parents. The first impression she makes may be the permanent one. The parents are more than likely to accept her at the children's evaluation, and the children are more than likely to make up their minds the first day whether they like the teacher or not. Thus within the space of a few hours her success is made or she is marked for failure. She should be particularly careful to do the right thing, because mistakes made on the first day are almost insurmountable. It is much easier to make a good beginning than to overcome any errors which may be made.

The story of Jean Mitchell contains some good suggestions. She was neatly dressed "in a cool grey linen dress with a blue ribbon at the throat and waist." She was in a good humor, for "Two merry brown eyes, keen and wide-awake, smiled out at the motley crowd." School was opened by singing "The Red, White, and Blue," and then the teacher told a story which she illustrated on the board. The little children were next put to work with colored pencils, while she gave a few minutes to classifying and enrolling the older ones. Then they too went to work, and the morning passed before they knew it. "The afternoon session passed as quickly as the morning had done. When

the last good-night song had been sung, the pupils went home in a maze of wonderment. What magic had struck the school? One lesson had followed another, but each contained some wizard touch that made it different from those of the old time."

First-day problems. The assumption is that the teacher will have completed in the preceding week all the preliminary tasks and so on the first day will have nothing to do but begin to carry out procedures already decided upon. With these preliminaries attended to, her problems of the day are reduced to the following:

1. Personal appearance
2. Time of arrival
3. Opening remarks and exercises
4. Getting acquainted
5. Enrollment
6. Classification
7. Seating arrangements
8. Assignments
9. Recitations
10. Recess periods
11. Routine procedures

1. Personal appearance. While personal appearance, like religion, should be given attention every day, it is worth while to be especially concerned on the opening day of school. The most becoming clothing should be worn; the hair should be well combed and brushed, the shoes well polished, the nails well manicured. A flower or some other bright touch of color to give an added note of liveliness may be worn. Each child will be attentive to the slightest detail. Pupils are impressed by fresh, neat, and attractive clothes and by a good general personal appearance.

Special caution should be taken not to go to extremes. After all, school is not a fashion show, and dress that is

foreign to local knowledge and a long distance from local standards will be frowned upon, perhaps laughed at. The few days that the teacher has already spent in the community should have afforded an opportunity to size up the local customs. Unless she knows these customs, it is better to be very conservative than too modern. Extremely short skirts and very low-necked blouses may offend as readily as shabby dresses and run-down heels. Rouge, lip-stick, and mascaro should be absolutely taboo; powder should be applied sparingly and the use of flashy jewelry avoided. There may be places where such things are appropriate, but the schoolroom on the first day is not one of them. Good taste and common sense should rule. Perhaps the standard of dress and personal care set by the most competent people in business is the most appropriate standard for teachers.

2. **Time of arrival.** The teacher should be in the classroom when the first pupil arrives. This means probably an hour before opening time. The children are eager to get to school the first day. They want to see their playmates; they are tired of vacation and very ready for school to begin. They do not want to miss anything that may happen, and they are most curious to see the new teacher. If by any chance she has made an acquaintance or two among them in advance who will report that she is a "good scout," so much the better. At all events, when the first pupil appears he should find the teacher in charge.

If the pupils arrive first, they are likely to feel that they are in charge of the school. They take possession of the seats as they choose, and little gangs may select adjacent locations where organized mischief can easily begin even before school takes up. They are familiar with the school; they feel at home. The teacher is a stranger. If the teacher comes in late, she may find her authority disputed and may have trouble in getting control. By being on hand early

she may look after the many necessary tasks of the day, put assignments on the board, see that the desks are dusted, arrange fresh flowers, get her books in order, and, best of all, greet the children as they arrive and begin the process of getting acquainted. The aid of those who come first may be enlisted in some of the routine preparations of the day. If parents call, they should be pleasantly received. Pupils who remain indoors should be directed to seats, and the room should be quiet when the hour comes for calling to order.

3. **Opening remarks and exercises.** A few opening remarks are in order if the teacher really has anything to say. It is not advisable to attempt a fixed or formal speech. There should be no unusual flattery and no threats. Often more harm than good is done by an opening speech. This is illustrated by the story of the new teacher who, in the course of her talk, happened to glance out of the window and note near by a high barn with a steep roof. The thought came to her how terrible it would be if one of the pupils should climb up on that roof and fall off, so she said she did not want any of the children to climb up on that barn. Now the barn had been there for years, and it had never before occurred to any of the pupils to climb up on it. The teacher had made the suggestion. The first recess no sooner came than several of the more daring pupils were on the barn. They wondered why they had never thought of the adventure before. It is best to confine the talk of the first day to getting plans into operation promptly.

Teachers who are competent may choose to have a short program of exercises, as did Jean Mitchell. Concert singing is very appropriate. If there is a phonograph a few selections may be played, especially if the records are new to the pupils. If members of the school board are present, it is almost necessary to ask them in turn to "speak to the chil-

dren," and the same is true if there is a visitor of prominence. Whatever is done, the program should not take very long, and the teacher should soon proceed to organize the school.

4. Getting acquainted. As soon as the opening period is done, slips should be passed by pupil monitors with the request that the children write their names on them. Older pupils may put down the names of those who cannot write. Next, textbooks, paper, and pencils should be distributed to those who need them. The pupils who can write should begin copying the assignments from the board, and may, as soon as they have finished, begin the preparation of the first assignment. The little children (if the school is rural) may be started to work copying pictures with colored crayons, playing with puzzles, or looking at books and pictures. The teacher should take a few minutes to look over the names and learn how they are pronounced.

If a list of the pupils has been obtained in advance the teacher will already be familiar with the names and their pronunciation. If not, she should go around among the desks and collect the slips, asking the children whose names are difficult how to pronounce them. Or she may have the names collected, and then later in the day ask an older pupil to help her with the pronunciations. The main point is that the pupils should be associated with their names as quickly as possible. The exact pronunciation should be learned; it is annoying to children and to adults to have their names spoken incorrectly. A child may think, "The teacher does not know much; she can't even pronounce my name." There is no quicker road to favor with pupils than to have them feel that you know them, and you cannot make them feel that without knowing their names.

5. Other facts of enrollment. At the time the names are secured some of the other necessary data may as well he collected too. In order to do this properly, the teacher

should know what records she will be required to keep and what reports must be made. It will prove helpful to know what use will be made of the material after it has been collected and sent in to the county superintendent or some other officer. In general, five main purposes are served:

1. The enforcement of the compulsory school law
2. The apportionment of school moneys
3. Giving information on school matters which will help the teacher to form her opinions
4. Helping the teacher in her work
5. Securing coöperation between the school and the home

Along with the names may be collected each child's age and the date of his birth, the names of parents, his residence, his class or grade, and the name of the last school he attended. The older pupils will have to be relied upon to help out with the younger ones' data. A few days later the returns may be checked against the register of the last year, the report cards, census cards, or some other record. In any case the name, age, and grade or class are indispensable first-day information.

6. Classification. First-day classification should be considered as temporary. If the pupils have report cards, or if the register shows in what classes they belong, they should be permitted to go ahead without question at this time. Many may come without a record of previous school work. Usually, in that case, there is nothing to do but to classify them according to where they say they belong. A child's age is a rough check on grade. Ten-year-olds would normally be commencing in the fifth grade, eleven-year-olds, the sixth, and so on. As a rule pupils should not be demoted on the first day. It may be generally understood, however, that any classification made on the opening day is subject to correction later.

The reasons against making first-day demotions are as follows: A failure coming in this way at the first of the year has a depressing effect that may not be overcome at all during the term. The judgment of the teacher who made the promotion is doubtless as good as that of the one who demotes. Some children fail to make a good showing at first because of timidity or fear; the teacher cannot really tell what they are capable of doing until she has had several weeks of trial with them. Pupils who are new to the school, especially those who have come from a different State, need plenty of time for making the necessary adjustment to new conditions and requirements. Finally, there is very little that is a prerequisite of anything else. Pupils can go ahead in fourth-grade reading or arithmetic without having absolutely mastered all of the third-grade work. School work is never perfectly graded as to difficulty; there will be third-grade exercises that are harder than many of the fourth-grade exercises. Then again, after a pupil has been over work once, he loses interest and does not make much advance in it. If it is found that the work is too hard for certain children, it is best to make simpler individual assignments for them and let them alone in their regular classes. Demotion is justified as a principle only when the pupil has misrepresented his classification.

7. **Seating arrangements.** Seating arrangements cannot be made final on the first day. As good a way as any is to let them take whatever seats they please and then later on to make such changes as are necessary. It might be announced that they may select seats to suit themselves, but that afterward changes may have to be made. Children of the same grade should be put together. Each child should be assigned a seat of the proper size for him. Pupils with defective sight, poor hearing, or weak powers of attention should be seated near the front. Little gangs and

cliques that cause disturbances should be broken up by a change in their seating arrangements.

After the pupils have been assigned seats and had their names taken, a seating plat may be filled out. The teacher will find this a great help in becoming acquainted with names and faces. It consists of a piece of heavy pasteboard on which are little paper flaps or pockets, one to represent each seat in the room. The names of the pupils are written on cards that just fit the pockets and each card is slipped into the proper flap. The plat is kept on the teacher's desk. Older pupils may fill out the cards and arrange them while the teacher is looking after other things. If a plat of the kind described is not available it can easily be made. A simpler plan is to rule a sheet of cardboard into rectangles which represent the desks and then write the names in temporarily with pencil; after the permanent assignments of seats have been made, the names can be printed in ink.

8. Assignments. The aim should be to get the pupils started on the regular school work as soon as it can be done. So far as possible, the work of the first day should be the same as the work of the other days. Pupils should not be dismissed any earlier than they will be in the future. The little children should be given some work that will keep them busy. The older ones should proceed to prepare assignments; they are able to work independently, and they, as well as the smaller pupils, are likely to start a disturbance if they are unoccupied. Chances for disorder will be minimized by having every one busy, at the earliest possible moment, on a definite assignment.

There are three ways to make the assignments. One is to put them on the board, another is to write them on slips and hand them out, and the third is to make them orally. The first two ways are preferred, because they provide for having the assignments ready in advance. Furthermore, it

takes only a moment to refer to written assignments and they are likely to be more definite. Written assignments cannot be forgotten or overlooked. Moreover, they can be made without distracting the attention of the other pupils. It is well to be ready for two situations: one in which the pupils have their books, another in which only a few reference books are available. In the latter case one must be prepared to teach orally or to review.

Some of the assignments for the older pupils should require written work. This work affords variety, provides work that may be checked up later if the day is a busy one, and gives the teacher an insight into the pupils' abilities. Care should be taken not to assign too much work, but at the same time there should be enough to keep every one busy. To avoid making a mistake on this point, each assignment may be separated into three divisions: (1) for everybody, (2) for those that work faster than the average, and (3) for the very best. As the pupils are usually desirous of making a good showing on the first day, this device will keep all of them busy and will test their abilities. If there are no books, the assignments may be of such a nature as to recall the work of the year before — that is, reviews. Emphasis should be placed upon the amount of work to be done, not so much upon its difficulty. Pupils should leave the school the first day with the idea that they have accomplished something, and they cannot do this if the assignments are too difficult.

9. Recitations. The first recitations should follow simple methods, and, if possible, methods to which the pupils are accustomed. It is a mistake to experiment with new methods on the first day. Questions and answers, topics, silent reading, and written summaries and outlines are good. It is better, on the first day, not to send any pupils to the board except the little children who need a change of occupa-

tion. If books are not at hand, the oral method may be followed, the teacher first giving the information, the pupils later reproducing it. Praise should be bestowed whenever there is any reason for it.

Hand work, play, and stories should make up most of the program for the little folks. Paper cutting, molding, and coloring are examples of the first activity; sand table, picture puzzles, blocks, and games of the second. Picture cutting supplies another good occupation. The teacher can find time to tell a short story, and perhaps to make a beginning in drawing and language. There is no need for hurry here; the main object should be to keep the children happy and interested and to see that they do not keep at one work too long without change of posture. Board work, games, the sand table, and the like supply some of the necessary variety.

10. **The recess periods.** Two situations are to be provided for: one, the more probable, when the pupils may go outdoors; the other when rain keeps them in the schoolhouse. It is unwise for the teacher to turn them loose outside while she sits at her desk; nor should they be allowed to scuffle and run in the schoolroom. Unplanned recesses invariably lead to quarreling and mischief of all kinds. Not only that, the unplanned recess means wasting an opportunity to add joy and health to the school life. Every one should participate in something; the teacher should be one of the play group and should enter enthusiastically into the play spirit. It is good for her health, and in addition the pupils will like her the better for it. In the rural school the greatest importance attaches to the teacher's direction of play, while in the city, unless a special supervisor of play has been appointed for her particular school, the teacher is responsible for the play life of her pupils. On the first day the play program should be simple. In the discussion of

the work for the whole year, given in Chapter XXI, may be found suggestions which may be applied to the first day.

There are two or three things which can be done on this first day. A short play program may be written on the board or a list of suggested games put up outside near the playground. Again, the teacher may ask the pupils just before recess to name the games they can play, and by this means can decide upon what to do. Still again, she may go out on the grounds with the children and take the lead there in starting games. If there is an older girl in the school, she can help with the little children. If there is play apparatus, some of the pupils may be directed to it. A few books that will help the teacher in planning for the recess period are:

Bancroft, Jessie: *Games for the Playground, Home, School, and Gymnasium.*
Curtis, H. L.: *Education Through Play.*
Elmore, E.: *Practical Handbook of Games.*
Johnson, Geo. E.: *What to Do at Recess.*
Parsons, B. R.: *Plays and Games for Indoors and Out.*

A program of indoor activities may be prepared in the event of the weather's not permitting outside play. This is a simpler matter than preparing an outdoor program. There may be concert singing, phonograph music, calisthenics, quiet games, story telling, or an interesting construction project. Physical exercise may be engaged in for a brief period with the windows and doors thrown open. If no program is planned and the pupils remain in the schoolhouse, they should stay in their seats. Otherwise disorder is sure to result, and it will probably carry over into the study hour. When there are so many things to do, there is no necessity for letting occasions arise for the mischief which comes from idleness.

11. Routine procedures. There are many items which

enter into organized school routine, and it is a question whether or not the procedures should be explained to the pupils and practiced the first day. Many teachers, instead of making assignments and conducting recitations, spend the whole day in drilling on marching in and out of the room, passing to and from the board, and distributing and collecting materials; and in explaining the rules of the school, the care of materials and books, the disposal of wraps and lunches, the use of the library, how to leave the room, and how to confer with other pupils. Our experience is that on the first day it is better to start the pupils to work and give no attention until the occasion rises to matters which are to be made habitual. When these occasions do arise, the pupils should go through the acts as they are to be practiced later, but drill is temporarily postponed. The discussion of the best methods to follow in such cases is taken up in the next chapter. We believe no rules should be announced the first day, and that routine be planned with the needs of the pupils in mind. Not all of these needs will be apparent at the same time.

Summary. The teacher's success or failure is more largely determined in the first five or six hours of her work than she dreams. If there are mistakes they must be remedied before further advance can be made. After assuring herself that all possible preparations have been seen to before the opening day, she should center the emphasis, that day, upon such problems as personal appearance, time of arrival, opening remarks and exercises, getting acquainted, enrolling pupils, classification, seating, assignments, recitations, the recess program, and routine procedures. The most important thing of all is to start the pupils to work, following the regular program. If routine is practiced, it should be in the manner which is to be made permanent.

EXERCISES AND PROBLEMS

1. Give all the reasons you can think of as to why the first day of school is so important to the beginning teacher.
2. Make a list of the things the teacher should do in preparation for the first day.
3. In parallel columns list the advantages of being at school early on the first day, and the disadvantages of arriving late.
4. List the advantages derived from doing a full day's work on the first day of school.
5. Why is it advisable to get the pupils busy on their lessons as quickly as possible?
6. List all the reasons you can why the first day of school may fail to start off properly.
7. What are the objections to formulating on the first day a list of rules for the pupils' conduct?
8. Discuss the nature of the assignments the teacher should have on the blackboard for the first day of school.
9. Discuss the importance of preparing carefully for the recess periods.
10. Suggest some interesting construction projects for the first day.
11. Suppose that in the morning recess you went out with the pupils to the playground and began directing and organizing the play. What would you do?
12. Suppose that in the afternoon intermission it rained hard. What would you do with the children in the schoolroom?

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CHAPTER VI

ORGANIZING THE DAILY ROUTINE

Significance of school routine. The significance of school routine can be no better illustrated than by quoting the following statement of a classroom teacher: [1]

> The one word that remained in my mind after the institute was routine. I went back to my classroom resolved to work out an efficient routine system. I appointed monitors to collect and distribute papers, and made definite rules for sharpening pencils, leaving the room, and getting a drink. In fact, I quite went to the extreme for a while — but even so, the "dove of peace" came to reign; at first only occasionally, but later for quite extended periods. Incidentally, I found that I became more cheerful and enthusiastic over my work, and that my day was relieved of the nervous tension which I have hitherto experienced.

Routine is the habitual way of performing the ordinary daily tasks of the school. There is generally one best way to go to the blackboard, to pass out to the grounds, to handle papers, etc. If there is not, one way should be selected out of a number which are equally good, and the children perfected by drill and practice until that one way becomes the best. Habit is a great timesaver and a conserver of energy. Good teaching is not often found where there is no system. The teacher's duty is first to organize routine on a sound basis and after that to demonstrate her ability to teach. The greatest cause of failure to discipline is lack of a uniform working plan of routine. Most beginning teachers have had as much training for teaching as have the experienced instructors in the field; they may know

[1] Irene L. Freemeyer, in *The Washington Educational Journal*, p. 211. (March, 1926.)

more about new methods of teaching; but they are less efficient than experienced teachers in managing children.

Guiding principles. The same principles that are applied to the learning of spelling, penmanship, and the other drill subjects may be applied to routine, the most important being here indicated in the following statements:

1. The pupils should have a clear idea as to how the act is to be performed — for example, passing to the board, using the library.
2. They should be shown why it is advantageous to follow a routine method.
3. They should be shown why the method adopted is the most economical of time and energy, as well as any other advantages that it possesses.
4. The procedure should be repeated, and close attention paid until it becomes automatic.
5. A routine should be followed regularly. Variations from the method, no matter how slight, should not be permitted. One should remember the purpose is to form a habit.
6. Motivation should be furnished through competition, praise, exhibitions, and the offer of rewards.
7. If satisfactory methods of routine have been instituted by preceding teachers they should not be changed. It takes time and trouble to break up habits; there is no value in breaking them up if they are good.
8. It is well to enlist the help of the pupils as much as possible. Line leaders, monitors, and helpers should be appointed.

What should be routinized. As many daily activities should be routinized as can be performed regularly and in the same manner without loss in learning and with economy in time. The exact procedures will depend upon the size of the school, its arrangement, and any special features that are peculiar to it. As a rule, the necessity for routine increases with the size of the class and the size of the school; its method and nature vary with the grades concerned. Pupils in the lower grades cannot be made responsible for their own

activities as can pupils in the upper grades. The teacher of a large class has more details to look after than the teacher of a small class and is forced to reduce more of the activities to the plane of habit. In a small class, many formalities can be dispensed with that must be strictly adhered to in a large group. A strong, experienced teacher can safely leave more to the pupils' initiative than can a beginner; once the pupils understand what is wanted, and what the process is, the performance will go ahead without much supervision by the teacher. There is some satisfaction in reflecting that the first two weeks are the hardest in forming habits pertaining to such ordinary routine affairs as:

1. Entering and leaving the room
2. Caring for wraps
3. Fire drills
4. Handling instructional materials
5. Using reference books
6. Study and recitation transitions
7. Blackboard work
8. Neatness and orderliness
9. Conferring with other pupils
10. Flag pledge and flag display
11. Leaving the room in school hours

1. Entering and leaving the room. Order, time-saving, and avoidance of injury to pupils are the objectives sought in establishing an entering and leaving routine. In some rural schools the pupils try, at intermissions and dismissal, to see which can be first out of the schoolroom. The result is disorder that extends to the school grounds, with the result that the visitor thinks, "This cannot be a good school; the pupils are so rude and undisciplined." If they come into the schoolhouse the same way, jostling, talking, and crowding, it takes that much more time to get in, and, of course, to quiet down and set to work. If there are steps to go down, some one is likely to be hurt in this hurrying and crowding;

if a fire breaks out, a panic, in which there is always a great danger, is nearly sure to occur. Whether formal marching in and out is required or not, at least the pupils should be quiet and refrain from running and crowding. These are requirements of common courtesy.

The size of the class and the arrangement of the schoolhouse will determine in the main how simple or how formal the plan will need to be. If the class and the building are large, the procedure will of necessity have to be somewhat formal. In a one-room rural school of only a few pupils, the procedure may be very simple; there need be no marching at all. The best thing to do is to adopt a reasonable plan that is suited to the size of the school and to the pupils, and then enforce its observance within reasonable limits. It does not pay to be too strict, because that raises more disciplinary problems than the marching solves. There are teachers who insist upon the pupils' forming absolutely straight lines and marching with military precision. This is being overparticular. Straight lines, alert response, and trim orderly behavior, however, do make an excellent impression, and, if the spirit of the pupils is right, give tone and morale to the whole school.

While the exact method of procedures must be fixed by the nature of the school, a few helpful principles may be suggested:

1. The signals should be given with a snap; marching should begin punctually. Standing in line wastes time and leads to breaches of discipline.
2. Marching in step is not essential and should not be insisted upon. It makes a good appearance, however, and may well be encouraged.
3. The most direct route and the nearest exit should be chosen, unless there are good reasons for using some other. The aim is to get in and out of the building in an efficient manner — not to give an exhibition in marching.

4. Lines should be formed in double file if that is practicable; this shortens the line and saves time.
5. Pupils should act as line-leaders, or captains.
6. The teacher should avoid giving the impression that she is policing or over-supervising. The coöperative-group idea should be stressed.
7. Music is desirable. A pupil may be appointed to play the victrola or the piano. A triangle or a drum may be substituted, if it does not seem to bore the pupils.
8. Pupils should return to the classroom over the same route by which they marched out.
9. There should be some special practice in the marching process until it is thoroughly understood.

2. Caring for wraps. The plan of taking care of hats and wraps will depend upon the location of the cloakrooms. If these rooms are located in such a way that in entering or leaving the pupils pass through or by them, wraps may be collected or deposited as they pass along. This is the best plan, but, unfortunately, cloak closets are sometimes inconveniently situated, or they may be lacking altogether. In such cases, it may be advisable for the pupils to take their hats and wraps to their seats, and monitors later on collect and place them in the closet. Each pupil should be assigned a definite hook for his clothing. In a town or city school, where the wraps are hung on the wall in the corridor, it is a good plan to stop the lines while the pupils get their hats and cloaks, and then have them form again and march out. This may take considerable time in the winter, when cloaks, overcoats, and rubbers are worn; and a few pupils may become disorderly while waiting for the others.

3. Fire drills. Safety, order, and time-saving are the objectives of the fire drill. As a rule these drills are required in all schools by law or by local regulations, and whether required or not they should be practiced as a safety measure. Perfect control is indispensable, because there

is more to fear from panic than there is to fear from fire. The training should be such that poise and self-control are developed; the pupils should have such self-command that they will take up the school work after a fire drill without any appearance of having been interrupted. Every rural school should be equipped with a fire extinguisher, and one or two of the older pupils should know how to use it. Suggestions bearing upon the organization and management of the drill are:

1. The serious purpose of a fire drill should be explained to the pupils. Group disapproval should be visited upon any one who violates the safety regulations, and in addition he should be held to account by the teacher. The neglect or foolishness of one may imperil the lives of all.
2. The fire alarm or signal should be one that cannot be mistaken, and should not be used for any other purpose.
3. The lines should be formed as for regular dismissal, and the same route should be followed, unless there is special reason for a change.
4. Marching should continue until a point a safe distance from the building is reached; the pupils should remain orderly in line until dismissed or told to return. In the city, care must be taken to keep out of the way of hydrants and fire engines.
5. The drills should be practiced several times the first two or three weeks, until the pupils become letter perfect; after that, once or twice a month is sufficient.
6. Designated older pupils should take assigned stations at the doors, steps, crossings, and at the final station. The leaders should be the pupils who lead in the regular marching.
7. The teacher should leave the room last, and should see that no pupil remains behind.
8. No time should be used in gathering up wraps.
9. If there are any little children they should be guarded by the older ones.
10. The pupils should move quickly, but should not run. Particular care should be taken to see that they walk down the stairs.
11. It is a good idea to keep a record of the time required to

vacate the room. Two minutes is sufficient time for clearing a large school building.

12. Fire drills should not be held when the weather is bad.

4. Handling instructional materials. More time can be wasted in handling instructional materials than in any other routine activity. If books are to be distributed to a class of ten pupils in reading, a monitor can do it in about one tenth the time it takes for each pupil to help himself, and with less than one tenth the confusion. If one pupil runs to get a pencil, another to put a paper on the teacher's desk, and the others wait upon themselves as their needs require, the result is constant turmoil. In the course of a day, each pupil can squander a large amount of his own time, disturb all the other pupils, and take the teacher's attention from her work. Everything points to the need of a regular system of collecting and distributing materials.

With little children, all the supplies they use should be regularly collected and distributed, even if furnished by themselves. If they keep pens, pencils, crayon, and tablets in their desks, the supplies get broken, soiled, or lost. If the pupil is without the necessary materials, he is handicapped in his work. Pupils often create disorder in getting things out of their desks; some one is sure to be slow at it. If supplies are kept in a central place, the teacher always knows what is on hand. With older pupils, supplementary books are practically the only material to be distributed, and written work is the only thing to be collected. Monitors should be chosen and trained to do this work; speed, accuracy, and order should be the ideals developed.

The next requirement is a convenient place of storage for supplies. This may be on a table at the front of the room, in a closet, or in the teacher's desk. For handling pencils, a pasteboard box with holes made in the cover may be used. The pencils are arranged in the same order as the

pupils' seats; a further way to make them easy to identify is to chip a little paint off the pencil, near the top, and write the owner's name on the wood. The monitors will see that the pencils are sharpened. Paper and books are handled in much the same way. Monitors pass down the aisles from the front, leaving materials on each desk; in collecting, they start at the back. Any system is proper which keeps down disorder, confusion, and waste of time.

5. Using reference books. Dictionaries, encyclopædias, atlases, and supplementary books should be freely used by the pupils. The habit of working with reference is a useful acquirement, and it should not be thwarted by too many regulations. The first step in inaugurating it is to place such materials where they are accessible: on a table, a shelf, or, if nothing better offers, a desk. Then permit the pupils to consult them as they please, only asking that there be no undue delays in doing so and no commotion that might disturb other pupils. Mischief starts, sometimes, when pupils do not have anything to do. If a little margin of freedom is afforded through full permission to study the dictionary, or look at maps and pictures it will tend to prevent breaches of discipline. Of course some will refer to these sources when there is no good reason, so far as preparing a lesson is concerned, for doing it. There is no harm, however, in this. Not all learning, or even most of it, results from assigned lessons; much of it comes incidentally.

Pupils should not have to ask permission to use reference books. Getting the attention of the teacher means delay. Moreover, it distracts her attention from her class, and leads to finger-snapping, whistling, and other types of disorder. It also discourages the use of the reference materials. The purpose of all routine-planning should be to relieve the teacher and to liberate the pupils. There should be little asking of permission for any reason. If a pupil abuses a

privilege, it can be taken from him. In using supplementary books and working out projects, pupils should be allowed all the freedom that they can use properly.

6. Study and recitation transitions. There are some schools where it is necessary for the pupils to change seats for recitation. Thus, in a rural school, there may be five or six pupils in back seats in the eighth grade. They may be divided into two groups by the width of the room. If the teacher stands near them, she cannot supervise the other pupils; if she tries to teach from the front of the room, she loses their attention and disturbs the others. If the school is crowded, special recitation seats may have to be used; if not, a section of the regular supply of desks will serve. With the seats properly arranged, the teacher can command the class and the room. Using seats at the side of the room for this purpose is not a good plan, because from that location the class will be able to see what the other pupils are doing and so be disturbed in their recitation.

If a change of seats cannot be avoided, some signals may have to be used. The class should move as a group, but in order to get this concerted action, it will not be necessary to do more than name the group — as "Class in History," for example. Some teachers are unnecessarily formal with their taps upon a bell, or their signals of "Ready, stand, pass, be seated." The close of the period should be sufficient notice to the pupils that they are to turn to the next work on the program. It ought not to be necessary to tell them each time. If some one asks what he should do next, refer him to the daily schedule. This should not be necessary more than twice.

7. Blackboard work. Blackboard work is a big school problem. The difficulty may be traced to a deficiency in management. Unless the use of the board is systematized,

the pupils have a tendency to rush to it in noisy disorder. They snatch erasers from each other; they drop chalk on the floor and trample it underfoot; and they stir up great clouds of unpleasant and unhealthy dust. Scrawly writing, badly formed figures, and ugly pictures decorate the surface of the board. A glance at the blackboard and the condition of the floor under it may give the supervisor a fairly accurate estimate of the teacher's ability in organization and control.

There is a growing tendency to have less board work done by pupils than was once the custom; instead, they are required to do the work at the seats, with pencil and paper. This is more economical of time than is the blackboard method, more orderly, and more sanitary. It conforms better with the method which the pupils will use after they leave the school. The board is now being used chiefly by the teacher, and for demonstration and assignment purposes. A smaller amount of board surface is required for this purpose, and the unused areas may be used as a pinning surface, or covered up with a light-colored burlap. However, as there are still schools where board work is done by the pupils, a few hints on the subject will not come amiss:

1. Each pupil should take the most direct practicable route to the board, and should follow it invariably.
2. Each pupil should always take the same place at the board, unless the teacher directs otherwise.
3. When it is possible, the board assignments should be given before the pupils leave their seats.
4. There should be erasers for all the pupils, properly distributed along the chalk tray.
5. The pupils should take crayon from the box as they pass to the board, or it should be passed quickly after they reach the board. Crayon should not be left in the tray because it gets knocked onto the floor, whereupon the pupils are tempted to carry it away and use it for defacing walks, walls, and buildings.

6. Each pupil should erase his work before leaving the board. He should be taught to erase from the top downward.
7. Once or twice a month the board should be cleaned with warm soapy water, or with a soft cloth dipped in kerosene. Reslating is necessary once or twice a year on all but slate blackboards.

8. Neatness and orderliness. It is natural for one to respond in a characteristic manner to his surroundings. A great cathedral inspires the feeling of quiet and reverence; a library produces the mood for study and reading. So, too, the school environment has its influence. Neatness and system tend to produce good work and systematic thinking. Ideals of order gained in school carry over into life elsewhere. A slovenly and disorderly school means one in which poor work is being done. Neat work and accurate work have a close relationship; clear thinking and the orderly arrangement of written work are intimately allied. It is essential, therefore, that neatness and orderliness become a part of the mechanized routine of the school.

The desirable habits of neatness and system apply particularly to the following:

1. *Arrangement of books and materials in the desks.* Every item kept in the pupil's desk should have a definite place. The owner should be able to obtain quickly the book or other article that he wants. There should be no necessity for bending over and looking in. Scraps of paper should not be left on top of any desk. The same order should prevail on and in the teacher's desk. She should set an example of neatness and arrangement worthy of imitation.
2. *Condition of classroom.* The classroom should be kept clean and tidy. There should be no signs of pencil shavings, torn paper, ink, crayons, or mud on the floor. Every pupil should be required to keep the vicinity of his desk in good order, a habit which frequent inspections by the teacher will help in forming. It is not enough to have a general cleaning up just before dismissal; tidiness is essential at all times. Conven-

iences such as a waste-paper basket, a pencil sharpener, a mud scraper, and a door mat will help to keep the room wholesome and neat.

3. *Personal cleanliness.* Neat work cannot be done with dirty hands; floors cannot be kept clean when shoes are muddy. Frowsy heads and smudgy faces do not make for good mental work, nor do they add to the freshness and cheerfulness of the room. It does not take long to set up the ideal and habit of having clean hands and faces and well-combed hair. If this matter is not attended to in the homes, the teacher will have to look after it at school.
4. *Written work.* Good form and neatness should be insisted upon in all written work, both at the seats and at the blackboard. The appearance of a paper offers fair evidence of the writer's mental habits. The writer's name, age, grade, and title should be written in a uniform place. Margins should be of uniform width, and the work well balanced.

9. Communication between pupils. It used to be the rule to prohibit pupils from "whispering" to one another, though more lenient teachers permitted communication so long as it was "about the lessons." Conference among pupils is a natural social tendency, and if properly regulated has educational value. If it is prohibited strictly, unnecessary problems are created, and in addition the prohibition is hard to enforce. If the children must ask permission before communicating, all the teacher's spare time is taken up granting it. As a discipline and economy measure, some other method than prohibition or permission should be worked out.

First of all, pupil conference should be looked upon as an essential socializing process of great educational significance. Socialization of school work makes it necessary for pupils to work together, to help one another, and to coöperate in the interests of all. There should be no rules against conference; pupils should be permitted to communicate among themselves without permission, though with the understand-

ing that the conference is for a commendable purpose, and that each is having due regard for the time of others. The method and standards may be worked out with the pupils in order to prevent abuses. The sovereign method for this kind of prevention is to take away the privilege in question from those who misuse it. A good rule is that if one pupil has some business with another, he shall transact it as quietly and quickly as he can, without making any disturbance. A cloakroom, an alcove, a corridor, or another room may be utilized for conferences of committees or individuals during school hours. The school routine should be planned to take advantage of the educational values of pupil coöperation and conference.

10. The flag pledge. It is customary in many schools to have the flag pledge or salute as a part of the daily routine, and, with flag display, is often a legal requirement. The flag salute should be the first item on the opening program. At a signal given by the teacher, every pupil should rise in his place and salute the flag. The salute is made by raising the right hand, with the fingers held together, until the palm is to the front and the tips of the fingers are in line with the forehead and close to it. The eyes are upon the flag. While in position, the pupils repeat together, slowly and distinctly, the pledge:

> I pledge allegiance to my flag, and to the Republic for which it stands. One Nation, indivisible, with liberty and justice for all.

At the words, "to my flag," each extends his right hand, palm to the front, toward the flag, and holds it there until the end of the pledge. Then all hands are dropped. While still standing, the children may sing *America*.

Flag display. Every classroom should have a flag. It should be displayed on a suitable standard, or, better yet, hung on the wall at the front of the schoolroom. When

displayed horizontally the lines should be kept straight, with the square of stars in the upper left-hand corner. When wall space requires that the flag be suspended vertically, the square of stars belongs in the upper right-hand corner. The flag should not be draped over a desk, picture, or anything else, and should not be tied in a knot. Old, faded flags should not be used.

Flagstaffs are a part of the required equipment of every rural school. While the pupils will consider it an honor to be entrusted with the duty of raising the flag, the teacher should oversee the process. One pupil may take the flag out and attach it to the halyards; another may raise it into position; while a third may have the responsibility of lowering it. The flag should be unfurled in the act of being hoisted, and it should be raised quickly. It should be lowered slowly before sunset, and should not be permitted to touch the ground. It should not be unfurled in rainy or windy weather, and should be brought in promptly if a storm arises. Some schools have a small storm flag that is used only in bad weather.

11. Attending to personal needs. Regulation of the use of the toilets and of getting drinks of water during school hours is another difficult problem. While the teacher should never prohibit leaving the room, she should adopt such plans as will render it seldom necessary. A warning bell five minutes before school convenes in the morning and at noon should be a signal to the pupils to attend to personal needs. They should know that recess is to be used for the same purpose. With little children, two five-minute intermissions each half-day are permissible. Some teachers insist that the pupils go to the toilets as they march out of the school, and that they get drinks as they come in. Although these devices do not prevent needs arising while school is in session, they do help in the formation of regular habits.

On the whole, it is better to be a little lenient here than to act in an arbitrary manner. Perhaps the best way to manage this problem is to allow pupils to go to the toilets when they please, without asking permission. They should record their names on a pad of paper hung near the door, and, if the school is large, they may indicate the time of going and returning. A check of this record occasionally will show whether any one is too frequently using the privilege of going out. If it seems, after a question to the parents, that the pupil does not really need to leave the room so often, he should be spoken to, and if this does not improve conditions, a stricter regulation may be applied to the offender. Some advise that no routine procedure such as described above be adopted, since the purpose should be to discourage leaving the room during school hours.

12. Signals. Efficient routine demands that all signals be simple, quiet, and easy to give. The simplest classroom signals consist of a word, a number, or a movement of the hand or head. The use of a tapping or hand bell is objectionable, unless the signal is meant for all. Movements of the hand or head make the best signals when only a few of the pupils are to respond, though a word may be spoken to gain the attention. By practice, a prompt response to the slightest signal can be established, even with animals. The famous educated horse, Hans, illustrates this. His remarkable accomplishments in arithmetic were due to responses made to minute and even unconscious movements of the trainer — movements so slight that it took psychologists a long time to discover them. Surely, then, children can be taught readily to understand the slightest sign.

It is not wise to use two or three signals to get one movement or response. Some teachers tap a bell once for children to get ready, once for them to rise, and a third time for

them to stand in the aisle. One signal for the whole movement "stand in the aisle" would secure better results. In calling pupils in from the grounds, a bell or gong may be used. As has been suggested, a warning bell will make for more prompt appearance at the final signal. At the second ringing, the children should immediately obey the procedure for assembling in the classroom. The tardy bell serves as a good signal for all to begin work, and advises the tardy ones that they are late. The pupils should not get the idea, however, that they have full license to be disorderly until the tardy bell sounds; they should be orderly from the moment they enter the room.

Summary. All routine duties should be reduced to automatic procedures as soon as possible after school begins. The purpose of such action is to make for order and system, to save time and energy, and to give tone and morale. Activities which should be made matters of routine are entering and leaving the room, caring for hats and wraps, fire drills, handling instructional materials, using reference books, study and recitation transitions, blackboard work, neatness and orderliness, conferring with other pupils, the flag salute, and leaving the room during school hours. The laws of habit formation apply to the teaching of these practices. There should be understanding, motivation, correct initiation, and accurate practice. The result is to relieve the teacher, and to add to the comfort and happiness of the pupils.

EXERCISES AND PROBLEMS

1. List all the school activities you can which you think should become mechanized routine.
2. Look up the laws of habit-formation, and explain how they apply to routine activities.
3. List the advantages and the disadvantages of having pupils participate in the working-out of the routine procedures to be followed.

4. Visit a classroom and estimate the amount of time wasted through inefficient routine methods.
5. Justify allowing pupils to confer with one another without permission.
6. Explain in detail how you would handle the case of a boy who you feel is abusing the privilege of leaving the room while school is in session.
7. List the advantages and the disadvantages of blackboard work by the pupils.
8. Work out in detail a procedure for pupils' use of reference sources.

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CHAPTER VII

TAKING CARE OF THE DISCIPLINE PROBLEM

Importance of discipline. Ability to discipline is the first essential of success in teaching. Almost the first question that a school officer asks about a teacher is, "Can she govern the pupils?" This consideration always figures on reference blanks and on rating cards. Investigations show that approximately a fourth of the failures among teachers are directly due to weakness in discipline. It is the bane, too, of many who do not completely fail. Their inability to cope effectively with discipline causes nervous strain, poor health, and discouragement, and results in mediocre instruction. The worries and problems are carried outside the schoolroom and become main topics of conversation; they haunt the teacher in her sleep and follow her on her vacations, until at length she votes teaching a miserable job and gives it up in disgust. The poor disciplinarian is worn out more by the effort to maintain order than by teaching.

It is not the teacher's side of the question alone that makes the problem important. A poor disciplinarian does irreparable harm to the pupils. Under such mismanagement they soon become firmly established in habits of disorder, disrespect, idleness, mischief, and in many of the vices that flourish in an unhealthy social atmosphere. Bad conduct begins with a few, but if it is allowed to continue unrestricted, it spreads, with all the force and virulence of a contagion, until the whole school becomes infected. It is just as well to know that truancy, vandalism, stealing, and immorality may have their origins in a poorly governed

school, and that bad citizenship may be cultivated just as truly as good citizenship. It is the conviction of experience that poorly governed schools had better be closed altogether, and that teachers who cannot govern should seek another occupation.

Sources of ability to govern. The ability to govern has two sources: (1) knowledge and training, and (2) the character of the teacher. It is not a mere matter of experience; there are poor disciplinarians who have taught for many years. First of all, you will need as a teacher to be well acquainted with the technique of control. You can obtain this training from books and discussions, but best of all from observing an expert. A good way is to pick out some successful disciplinarian, carefully study the methods that she employs, and then adopt for your own those that are the most striking and the most in accord with your own powers. Second, your knowledge of the subjects to be taught should be so thorough as to command respect and free you from the immediate bondage of texts and notes, thus leaving you at liberty to command the school.

At the head of the character traits which make for ability to govern we put *the will to control.* The teacher who is weak and indecisive, who doesn't know whether she is in charge of the school or not, will never succeed as a disciplinarian. It is not a matter of height, weight, good looks, or knowledge; it is a matter of downright determination and persistence. Children give up easily to a person who acts promptly and vigorously and who shows, by every act and word, that she expects to rule. It makes trouble to be afraid of antagonizing pupils or parents by the administration of correction. Exercising indulgence is a poor way to court respect and popularity. Courage, firmness, and self-control are attributes of will which in a short time build up for the teacher a reputation that simplifies the problem.

It comes about that the pupils expect to behave themselves and do so without compulsion. Other qualities which reinforce will are:

1. Eternal vigilance
2. Alertness
3. Dignity
4. Patience
5. A sense of justice
6. A sense of humor
7. Common sense

Purposes of discipline. The regulative aspect of discipline is the most important to the beginner. This emphasizes the type of control that makes it possible to carry on the work of the school quietly, smoothly, and without great effort. Under this control the pupils are led or compelled to do what they ought to do and are prevented from doing what they ought not to do. This is helpful in forming desirable habits as quickly as possible; and any bad practices are nipped in the bud as soon as they appear. Advantage is taken of the principle which says, "The great masters of life are pleasure and pain": good conduct is made to prove highly satisfactory, and bad conduct to have unpleasant consequences. This exercise of the "police power" of the teacher is not the happiest part of the daily work, but it is a very necessary part, at least until good habits are formed.

Building up good citizenship is the second purpose of discipline. In this connection discipline is mainly a teaching function by means of which the pupils learn the purpose of government, why certain conduct is right and other conduct is wrong, and why they should help in maintaining good order. They are trained to coöperate in managing the school; they are given experience in leadership. The school may be organized with elective officers, such as president,

secretary, and treasurer. Health officers, line captains, monitors, and librarian may be appointed. There may be committees and helpers to receive visitors, attend to room decoration, collect a museum, take care of playground apparatus and play equipment, and do all manner of things. Nothing steadies young people like responsibility. Every service should be commended. Merit credits, letters, certificates of honor, stars, and public approval are suitable rewards. In time, the good-citizenship motive may become so strong as to make regulation by the teacher of minor importance.

Reasons for infractions of discipline. Trouble can be more easily prevented and offenses more satisfactorily diagnosed if the teacher is familiar with the causes lying back of breaches of discipline. First in the list stands lack of training and development. Children are not much more than little animals when they come to school; and they retain their animal characteristics unless they are taught human ways. They have to learn not to steal, not to lie, and not to fight; they have to be taught honesty, truthfulness, and regard for others, just as they have to be taught spelling and reading. One cannot expect little children to have the ideals of well-trained and cultured adults. They cannot know right from wrong until they have been taught. If an investigation of a case shows that the pupil acted in ignorance, the remedial measure is instruction rather than punishment.

Bad home conditions are another cause of disciplinary troubles. If the children are not taught and controlled at home, it will show in their school conduct. Parents often permit their children to flout their authority, to speak disrespectfully, and to use vulgar and profane language. If the home life is not happy, the children may be morose, stubborn, quarrelsome, and impudent. If they do not have

suitable food and sleep they will be nervous, inattentive, and mischievous. Physical defects, such as bad teeth, diseased tonsils, and malnutrition are inevitable attendants upon poor home conditions, and they inevitably complicate school government with tardiness, irregularity of attendance, irritability, and inability to make progress. Children who labor under these handicaps deserve great sympathy, but they also need special training that will help them to improve their home conditions as they get older.

Other reasons for disciplinary troubles may be summarized briefly as follows:

1. *Poor school conditions* A well-ordered, clean, and attractive school environment has a wholesome effect upon behavior; insanitary, ugly, and coarse surroundings have a detrimental effect.
2. *Unsocial pupils.* Some pupils are centers of trouble. They may be mentally deficient, or simply depraved. Over-age and retarded children may make for disturbed conditions.
3. *Poor teaching.* Poor teaching, which is the result of inability to control, also leads to disorder and culminates in an unruly school.
4. *Bad associates.* Older people often suggest improper lines of conduct to children. Investigation may show that older boys outside of school instigate some of the gravest offenses that children commit. Smoking, lying, stealing, malicious mischief, and obscenity may be traced to gangs and to associations formed with older boys.
5. *Natural tendencies.* Trying to attract attention, showing off, resenting restrictions upon activities, giving vent to surplus energy, and imitating other mischief makers all seem to be natural manifestations. Certainly almost all children exhibit them at one stage or another.

Types of disorders. The various types of disorders are nearly as numerous as the individuals in the school. In a poorly governed school pupils will outdo themselves to invent mischief. They will commit such common types of

classroom disorder as making faces, throwing paper wads and chalk, placing pins and tacks in chairs, teasing, bringing in mice or other animals, chewing gum, and whispering, and at times add such graver offenses as stealing and truancy. The teacher here needs a good sense of proportion. She should have some standard that will enable her to judge the relative seriousness of the various acts. The teacher who makes a mountain out of a molehill and then overlooks a serious offense, soon loses the respect of the pupils. Circumstances under which an act is committed should be considered. Forgetfulness, unusual exasperation, strong temptation, and ignorance of consequences may cause a child to do something which otherwise would never have entered his mind. Likewise, the character of the offender should be taken into account. An occasional lapse from perfection by a really good child is less serious than the continual misconduct of the habitual disturber. With the understanding that, in a particular case, account will be taken of all attendant circumstances before judging, the following classification of common school offenses into two groups, the minor, and the serious, is made:

1. *Minor offenses*	2. *Serious offenses*
a. Whispering	a. Lying
b. Gum chewing	b. Stealing
c. Pushing in line	c. Truancy
d. Eating in school	d. Fighting
e. Whistling in school	e. Vandalism
f. "Monkey shines"	f. Using tobacco
g. Throwing paper	g. Gambling
h. Stamping feet	h. Disobedience
i. Note writing	i. Pins and tacks in chairs
j. Rudeness	j. Vulgarity
k. Tardiness	k. Bullying

Such typical offenses may be classified in other ways. Minor offenses are characteristic of the schoolroom; serious

offenses usually are committed on the school ground, or on the way to and from school. Girls do not commit more than twenty-five per cent as many offenses as do boys. When girls are guilty, it is usually of minor types of mischief, such as note-writing, gum-chewing, and whispering; the serious offenses they commit are confined to stealing and lying. Usually it is boys who are guilty of the graver crimes and they are responsible for most of the disorder. This does not mean that, except in cases where control has been neglected, all boys or even most boys cause trouble. In a given school a few individuals will be responsible for most of the disciplinary problems, and they instigate much mischief that they do not commit personally. In a large high school recently studied, it was found that seventy per cent of the violations of the school rules could be laid at the door of two per cent of the pupils — a condition not very different from that existing in almost any school.

Methods of treatment. Methods of discipline may be classified as preventive and corrective. The use of the first is the mark of a wise disciplinarian. She does not wait for cases to arise but shows great ingenuity in taking constructive measures to prevent misconduct. She organizes routine and makes it mechanical. She works out daily plans, makes daily preparation, and gives clear and definite assignments. The accepted standards of conduct are understood by all. Periods for activity in plays and games are provided and are systematically utilized. These essentials are further reënforced by four important principles:

1. Keep every one busy.
2. Build up a good school spirit.
3. Maintain the proper personal attitude.
4. Seek permanent values.

1. Keeping every one busy. Nearly all problems of

discipline arise during times of idleness, in or out of the schoolroom. There is nothing truer than the maxim, "Satan finds work for idle hands to do." The secret of good discipline is to keep every pupil so busily occupied with his work and play that he will not have time to get into mischief. A mischievous boy who was transferred from one school to another was asked why he did not "show what he could do" in the new school. He replied, "The teacher keeps me so busy on arithmetic, geography, and all the other subjects that I can't think of anything else." It is certain that if children do not have enough to do to keep them busy, or are not held to account for what is assigned, they will be noisy and unruly. When the good teacher detects a tendency toward disorder she does not say, "Don't do that"; she has something worth while in mind for them to do and says, instead, "Do this."

The pupils who usually cause trouble are of three types: (1) those whose capacity or attainment is not equal to the work assigned; (2) those for whom the work is too easy; and (3) those who have not acquired proper habits of study and attention. A backward or mentally deficient pupil should be given something that he can do, whether it is in the course of study or not. It is better for him to draw pictures, make scrapbooks, do easy reading, whittle, or work in the garden than to become a disturbing element in the school. The pupil who is in advance of his grade should be given special assignments, or put where he belongs. The bright pupil should have more work assigned him and be given considerable opportunity to choose for himself; hobbies, reading, leadership activities, and projects may be used to develop his interests in orderly school life. The lazy and inattentive pupil should be checked up and held rigorously to his duty until good habits are formed, when he can take care of himself. If this does not avail, isolation, punish-

ment, and suspension are the only resources, provided his interests have been fairly well served.

2. Building up a good school spirit. The second essential is a good school spirit, the chief characteristic of which is an attitude of good will and coöperation. Each pupil should realize that it is the other pupils, and not the teacher, who are primarily concerned in the matter of his conduct. The disapproval of the pupils themselves should be sought on every occasion of disorder. Smart Alecks will do everything they can to show off, to raise a laugh, and to make themselves the center of the stage. If they fail to create a sensation, or if the others openly disapprove of them, they will stop making nuisances of themselves. When the pupils take pride in having a fine spirit of orderliness and service in the room, then the problem of discipline is over half solved. The methods of creating this spirit are many, and their employment will depend upon the teacher, the pupils, and the needs of the school. The list which follows contains the elements which experienced principals believe to be essential in building up school spirit:

1. Pupil participation in government
2. Opening exercises prepared by the pupils
3. Group discussion of improper forms of conduct
4. Special instruction in manners and morals
5. A school-service program, with recognition for the deserving
6. Well-managed routine
7. A sympathetic teacher
8. An organized play program
9. Special-day celebrations
10. A school creed
11. Varied assignments
12. A parent-teacher association

3. Attitude of the teacher. It was the opinion of David Page that *teachers govern best when they do not seem to govern*, and that those who make the most effort and bustle about it

are pretty sure to have boisterous schools. He describes a visit to a school in which a man "six feet high and with lungs in proportion" was laboring to keep order. "Every word he uttered," says Mr. Page, "was in a stentorian voice which would have been painful to the pupils in a quiet room; hence they took care to keep up a constant clattering of books, slates, and rulers, mingled with the constant hum of their own voices, as if in self-defense. It seemed to be a mighty effort for each party to rise, if possible, above the noise of the other." The noisy manner of the teacher was reflected in the school: "he taught in the most effectual way the science and art of confusion." Later on, Mr. Page visited the same school and found it in perfect order. "Now the secret was, that this latter teacher had learned to govern himself. His own manners gave character to the school." A quiet, composed, deliberate teacher will have a quiet, orderly school.

The teacher's second rule in acquiring a proper attitude should be never to take the act of a mischievous pupil as a personal affront. It should be made clear to the offender that by his bad conduct he has interfered with the work and happiness of others, and the duty of making things right should be his own responsibility. The teacher should maintain the position of an impartial judge between the welfare of the group and the offense of the pupil. While the culprit is under charge, and before he has made amends, he should be denied participation in the activities of the group. The problem and worry of reinstatement should be shifted to the pupil, not borne by the teacher.

The third rule is to handle personally all except isolated and abnormal cases. The teacher should bear in mind that every time she has to call on others for help she acknowledges her own inability to cope with the situation. This naturally weakens her control over the school and at the

same time destroys to some extent her self-confidence. If she needs assistance, it should be first in the nature of advice as to what to do. After she has followed good advice and exhausted other resources, then if failure results she may turn the problem over to somebody else. The rural teacher learns independence through necessity; the city teacher would do well to imitate her to a large degree in this respect. When the case is very unusual, when not all of the facts are known, and when pupils from more than one room are involved, it is a good thing to call upon the principal for assistance. Ordinary cases of bad classroom conduct should always be dealt with by the teacher in charge; no one else can deal with it for her.

4. Securing permanent values. The immediate values of good discipline are happy children who are making progress in their studies. The permanent values are even more important. They include habits of attention, industry, order, and obedience. They comprise courtesy, tact, politeness, and consideration of others. They embrace the elements which make up service, coöperation, and leadership. All of these things go to make character of good quality, that greatest possession. The basis for the future success of pupils is laid just as surely in habits of good citizenship as in knowledge of subject-matter. Some of the means by which permanent values may be realized through discipline are:

1. Socialized class activities
2. Pupil help in school tasks
3. Clubs and leagues
4. Honor societies
5. Creeds and codes of behavior
6. Student councils and welfare committees
7. Service to the community
8. Visitors' committee
9. Playground leadership

10. Committees on neatness and order
11. Thrift campaigns
12. Special day and week programs
13. Patrons' day
14. Recognition of achievement

Dealing with offenses. Corrective methods apply after the offense has been committed. Although they are like locking the stable after the horse is stolen, prompt and determined action may turn many a young evil-doer from the error of his ways. What the action should be depends upon many things. The advice used to be, "Suit the punishment to the crime"; now it is, "Suit the punishment to the child." A third interest represented appears in the injunction, "Protect the interests of the other children." The object in administering discipline is to prevent a repetition of the harmful act and at the same time correct the child without doing it any deep-seated or permanent injury. The first motive is concerned with protecting society; the second, with helping the child. The following list of disciplinary methods open to the teacher runs the gamut from the very mild to the decidedly drastic:

1. *Instruction.* The child is told in a kindly manner that the act is wrong, and what the results will be. He is given something else to do, and at the same time is told that a repetition of the act will cause displeasure.
2. *Appeal.* He is instructed as before, and is also appealed to through his honor, his sympathy, and his manhood to refrain in future from the wrong doing. The pledge of good conduct in the future may be made to the teacher, the school, or the parents, or to all of them.
3. *Admonition.* This may consist of a rebuke, a sharp reprimand before the group, a "good talking-to" in private, a loss of privileges, or an expression of disapproval by the group.
4. *Infliction of pain.* This includes the various forms of corporal punishment.
5. *Suspension.* This may mean temporary forced withdrawal

from school. When a pupil's conduct is so bad that the safety and moral welfare of the pupils and the stability of the school are threatened his permanent withdrawal is the only proper measure.

Administering punishment. When punishment is necessary, it should be administered with good judgment, and without, so far as is possible, outrage to the feelings. It should never be inflicted upon an entire group for the fault of one individual, nor upon any one unless he is clearly to blame. Care should be taken not to use any cruel or unusual form of punishment, nor one which outrages the sentiments of the community. Authorities are quite well agreed as to what punishments are proper and what are beyond reason. These conclusions are:

Proper punishments

1. Loss of privileges
2. Apology before the class
3. Isolation from others
4. Detention to overcome a piece of neglect
5. Reproof
6. Serious talk
7. Notifying parents
8. Rebuke or reprimand
9. Restoring damage
10. Corporal punishment
11. Suspension
12. Expulsion

Improper punishments

1. Low grading in scholarship
2. Compulsory apology
3. Keeping in after school
4. Enforced idleness
5. Threats, ridicule, and sarcasm
6. Scolding and nagging
7. Sending home
8. Cuffing upon ears, head, or face
9. School tasks
10. Solitary confinement
11. Personal indignities (tying up the mouth, court plastering the lips, gagging, washing out the mouth, making the offender hold heavy objects, stand on one leg, stand in a fixed position, etc.)

Special rules. Some worth-while rules to remember about punishment and discipline in general are:

1. Do not deal with an angry pupil.
2. Control your own temper; do not assume that the act was done to annoy you.
3. Do not decide hastily; it is often wise to postpone a decision for several days. But it should be made sooner or later.
4. Give the pupil a chance to present his point of view; be sure that he understands what he is charged with.
5. Do not harbor a personal animosity against any pupil, no matter what he has done. When a case has been settled, let it be forever forgotten.
6. Do not talk about disciplinary problems in public; avoid saying anything that reflects upon any child.
7. Avoid imposing penalties that also punish you — such as keeping the child in after school.
8. Do not threaten; seldom issue commands.
9. Do not be led into saying what you will do in the event a certain act is committed, such as "I will whip any pupil that brings candy to school."
10. Make a record of the serious offenses, giving full particulars, with the final disposition made of each case. If it is necessary to punish a nervous or hysteric pupil, it is best to have an adult present as witness.

Dealing with parents. Successful discipline also involves the ability to deal diplomatically with parents. Frequently the teacher could settle a matter easily with a pupil if the parents did not interfere. There are parents who are offended if all disciplinary measures affecting their children are not referred to them for approval. There are supersensitive parents who take any allusion to misconduct on the part of their children as a personal affront and an attack on their moral and social standing. There are some who believe their children can do no wrong. There are gullible parents who are taken in by whatever stories the children tell. There are faddists who expect the teacher to manage their children by peculiar and abnormal means. There are revengeful parents who coach their children in ways and means of getting even. There are ambitious parents who

expect more of their children than they are able to do. There are officious parents who, in their capacity as citizens and taxpayers, attempt to dictate how the school shall be run. There are modern parents who enforce no obedience at home and want their children to be unrestrained at school. There are ignorant parents who feel that their children are being imposed upon.

These persons usually come to school to complain or else write complaining notes to the teacher. In the former case, the teacher should listen calmly to what they have to say. She should not get angry nor reply discourteously. After the visitor has had her say, the teacher should state her side of the case briefly and dispassionately. If there is a difference of opinion, she should ask for time for investigation and consideration. A letter should always be given a courteous answer. The attitude of the teacher should be that she as well as the parent is interested in the welfare of the pupil, and that both desire to coöperate to the best advantage. If the parent tends to push the teacher unfairly, the latter should insist that the whole matter be referred to the principal or to the county superintendent. The city teacher has an advantage over the country teacher in that, when an angry parent appears, she can ask the visitor to go to the principal's office for a consultation. She can also refer all letters to the principal for answer. The rural teacher cannot do that, but at least she can offer the visitor a seat in the hope that her anger will die down before it is time for the interview.

Summary. Weakness in discipline is the main cause of failure among teachers. Success is dependent upon being trained in correct procedures and in possessing a spirit of determination and firmness which may be called the *will to control.* The two purposes of discipline are educational efficiency and the development of citizenship. Violations

of the rules are due in about equal measure to some lack in the home, in the school, in the pupil, and in the community. Disorders may be classified as minor and serious — the first kind the usual run of classroom disorders, and the second the graver misdeeds of playground and leisure time. Methods of treatment are classified as preventive and corrective. The chief precautions should be to keep every one busy, build up a school spirit, hold a good personal attitude, and strive for citizenship values. Some form of admonition or punishment is usually administered for misdeeds, varying from minor corrections to suspension. Punishment should be adjusted to the nature of the child and should have the highest possible preventive value. Unusual effort should be made to be tactful and courteous to parents who call or write about disciplinary matters.

EXERCISES AND PROBLEMS

1. Give all the reasons you can why a good teacher must be a good disciplinarian.
2. Select the best teacher you ever had, and consider to what extent she seemed to possess each of the personal qualities of a good disciplinarian that are mentioned in this chapter. Do the same with regard to the poorest teacher you have had.
3. Take actual examples of disciplinary cases of which you are acquainted and try to classify them according to the causes outlined in this chapter.
4. Give actual examples illustrating each type of disorder mentioned. Explain how it was handled. Criticize the procedure.
5. Show how, in good discipline, prevention should be emphasized more than merely handling cases when they occur. Suggest some good preventive measures.
6. Suggest all the ways you can for building up a good school spirit.
7. Show the relationship between methods of school government and good-citizenship training.
8. List the advantages and the disadvantages which in your opinion are involved in student self-government.
9. Outline your procedure for handling a leader who has the reputation of being to blame for the unruliness in a school.
10. Make a list of all the things a prospective teacher can do to prepare herself for taking care of the discipline of a school.

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CHAPTER VIII

KEEPING UP THE ATTENDANCE

Importance of attendance. Two well-known facts emphasize the importance of attendance. First, every school has an attendance problem, great or small; and second, it is of no use to maintain a school if the children do not attend. If no attention is given to attendance, some pupils will not come to school; instead they will spend their time in idleness and in picking up bad habits, or they will be overworked by their parents. If, on the other hand, attendance is overemphasized, some few pupils will come to school when it would be better all around to have them stay at home. The enforcement of the compulsory school law is not the whole problem. The idea should be so to conduct a school as to have attendance voluntary — with the pupils coming to school because they like it and because they get something of value by coming. If they do not come voluntarily, the ideal is to have the parents apply the pressure without appealing to the school authorities. In any event, the first essential in promoting attendance is a good school.

Yet the fact is that the value of a school can be estimated quite accurately in terms of attendance. Progress in subject-matter is dependent upon the number of days of attendance, and upon its regularity. Pupils who stay away when the spirit moves them undermine the morale of the school, take up the time of the teacher unnecessarily, and interfere with the progress of their class. When children are in school they are protected against child labor and often are surrounded by much better health conditions than at home. They are kept from falling into bad company and

from forming bad habits. They develop habits of punctuality, industry, and morality. Poor attendance is sometimes a sign of a poor school; also it may be a sign of poor social conditions in the community — sickness, poverty, ignorance, and vicious tendencies — all of which it fosters. Good attendance not only promotes educational achievement; it is also the best guarantee of good citizenship and of the protection of childhood. In developing a suitable program for attendance oversight, the teacher is compelled to consider five major problems. These will be treated in the following order:

1. The compulsory school law requirements
2. The analysis of conditions
3. The development of standards
4. The causes of non-attendance
5. The improvement of attendance

1. The compulsory school law. The beginning point is the requirements of the compulsory school law. The teacher should be perfectly familiar with the provisions of this law as to: (1) who come under the law; (2) who are exempt from its provisions; and (3) how the law is enforced, which includes her own duties in this respect. Although such laws differ in the various States, if a typical one were analyzed, results much like the following would be found:

1. *Who come under the law.* All children between the ages of eight and fourteen.
2. *Who are exempt from it.* All children of school age under eight and over fourteen, all physically or mentally incapable of attending, all who live more than two miles from the schoolhouse, and all who are attending other schools or receiving suitable instruction at home, and all who have been given work permits.
3. *The teacher's duty.* To report violations of the law to the principal, attendance officer, county superintendent, or other authority designated in the law.

There are two things to remember about compulsory education. The first is that many pupils ought to be in school who do not come under the law at all. This includes all the six- and seven-year-olds and the many pupils of school age who are above the compulsory school limits. Taken together, these may constitute more than a fourth of all the enrollment. Some other than compulsory means must be adopted to get them into school and keep them there. The second thing to remember is that the compulsory school law should not be used simply to get people into trouble. There was an attendance department once that used to boast about the number of truants it brought every year before the juvenile court. This is the wrong idea. Instead, the object should be to secure good attendance without invoking the law at all, and never to appeal to it until everything else has been tried, unless the case is a particularly flagrant one. Of course, if the teacher's only duty in respect to the law is to report offenses, she should do this faithfully, leaving it to others to decide what shall be done after that. Her further duty consists in using such measures as will prevent violations.

2. Analysis of conditions. In considering the problem of attendance it will help a great deal to know what local conditions are. As soon as possible the census figures should be examined and compared with the enrollment. From this comparison, two lists may be made up, containing: (1) the names of pupils coming under the compulsory school law who are not enrolled, and (2) the names of pupils who are not under the law and not enrolled, but who ought to be in school. With the help of the pupils, still a third list may be compiled consisting of the names of pupils who are not on the census list and who are not enrolled. Inquiry should be made to find out why absent children are not in school. This may take the form of a call at the home or of

a kindly note addressed either to the parents or to the pupil, or the responsibility of securing the information may be delegated to certain of the pupils. An invitation to the pupil to come to the school is sometimes more effective than an inquiry.

As soon as convenient, a teacher should examine the attendance record of her pupils for the past year. A good way to analyze this record is to list the names of the pupils, and at the right of the names to rule off columns in which to record the number of days that each child was present and the number of days that he was absent in each month. From this record the totals for each month and for the whole year may be computed. Two tables, one for attendance and one for absences, will simplify analysis. If the class is large, it may be advisable to separate it into two groups: those who come under the law, and those who do not. The results should show which pupils present the main problems, and may to some extent explain the causes. Some general conclusions which could be expected are:

1. Most of the children attend regularly and offer no particular problem.
2. A few pupils attend school regularly, but they enter late in the fall and leave early in the spring.
3. A few pupils attend for a short time at the first, middle, or last of the term and then drop out permanently. They are the transient type, whose parents move from place to place as need or fancy dictates.
4. There are a few pupils who are irregular in attendance. They come for a few days, then are absent, then return, and so on.

The analysis by months also suggests causes of non-attendance, as the following comments on conditions in a small western school system will show:

September: Low enrollment in upper grades, high in lower. Average daily attendance very good. Older pupils

kept out to work in the fruit harvest. Both the compulsory school law and the child labor law are being violated.

October: Enrollment on the increase, attendance above average.

November: Enrollment still increasing; slight decline in attendance, due to bad weather.

December: Enrollment unchanging, though the curve for the fall months has been gradually upward. Attendance falling slightly, due to bad weather and sickness.

January: Upward trend of enrollment curve, new pupils having entered. Per cent of attendance about the same as in December.

February: Enrollment level the same as in January; attendance below the December standard.

March: No marked change in enrollment; attendance falling below any other month.

April: Enrollment increased by entrance of a new class of beginners; attendance a little higher than in March.

May: No change in total enrollment. Older pupils leaving to go to work. Attendance somewhat irregular, and there is a small amount of truancy.

June: Enrollment curve at the May level. Pupils low in subjects and likely to fail have dropped out. Attendance fair. The curve of enrollment for the year shows a gradual rise until December, then a plateau, another rise until February, then a plateau until the new class enters in April, a plateau remaining for the rest of the year. The attendance curve shows high points in October, January, and April, but the trend is gradually downward from the highest point attained in the fall.

In schools where a graphic record of attendance has been kept by days, several interesting features may be observed. Mondays and Fridays are the days on which there is the most absence. This is owing to the tendency of certain pupils to begin week-end trips early and extend them into Monday. Excessive play and over-eating, also, are week-end features that mean absence from school on Monday.

In these days of automobile trips, pupils are often kept out of school on the day preceding a holiday. Among certain races and religions many pupils are absent on feast and festival days and on days of special religious observance. The same people keep their children out of school to attend weddings and for every other occasion of rejoicing and celebration.

3. **The development of standards.** Only in the better schools does an analysis of conditions reveal satisfactory standards. In thousands of schools conditions are deplorable. A fourth of the rural-school children attend less than ninety-five days a year; half of them are present less than one hundred and forty-two days; only one fourth attend more than one hundred and sixty-four days. The average daily attendance is about sixty-eight per cent of the enrollment, which means that nearly one third of the pupils are absent every day. This attendance equals only sixty per cent of those that should be in school. While a better record is made by city schools, the average attendance is only seventy-nine per cent of the enrollment, showing that every day one fifth of the pupils are out of school.

Perhaps the best standard to set in the beginning is that of the preceding year. This can be derived from the register or some other record, and should be displayed graphically on the board or on a large sheet of paper. As each day or week passes, the corresponding curve for the current year is drawn, and comparisons are made with the record of the corresponding period the past year. If this curve is too low, another curve might be drawn above and marked, "What the attendance ought to be." This ideal should not be placed so high that it is impossible of attainment. As school progresses, the teacher should study the record of the past year for a month or two ahead and see if she can remove the causes that operated against attendance then

so that attendance in her own year will not be reduced. To illustrate, suppose lack of interest in the school and desire to be outdoors were the causes of poor attendance during the last week in March in the preceding year. Would not a knowledge of this fact make it possible for this year's teacher to adopt preventive measures that would obviate any such results? In poor schools the standard should be raised year by year; in good schools the past standard should be considered permanent. It is to be remembered that perfect attendance is not to be expected except under the most favorable circumstances, nor is it, under present conditions, desirable.

4. **The causes of non-attendance.** If an analysis of conditions reveals the fact that an improvement in attendance is necessary, an attempt should be made to discover

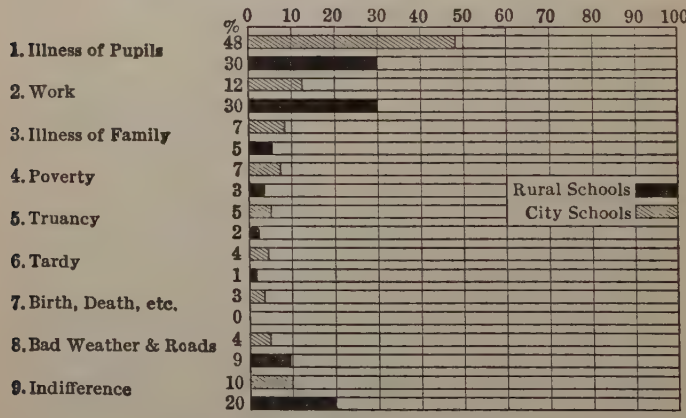

FIG. 2. CAUSES FOR NON-ATTENDANCE

why the attendance is poor. This is not so difficult a measure as might be imagined, and it is absolutely essential if a satisfactory improvement-program is to be developed. Upon investigation, it will be found that a few pupils cause

most of the absences, and that the reasons for absence that are given cover a narrow range. Of course, one needs to distinguish between the real reason and what is often written in the notes of excuse. The latter give, in the main, reasons that are acceptable under the law, sickness leading. Where careful studies of non-attendance have been made, however, the results show that the home, the pupil, and the school have to share about equally the burden of unnecessary absences. Among rural pupils perhaps a little the largest share of the blame rests on the home. A rough division of actual causes is as follows:

TABLE VIII. CAUSES OF NON-ATTENDANCE

ACTUAL CAUSES	CITY SCHOOLS (per cent)	RURAL SCHOOLS (per cent)
Illness of pupils	48	30
Work at home or for others	12	30
Illness of members of the family	7	5
Poverty — lack of shoes and clothing	7	3
Truancy	5	2
Tardiness and stayed at home as a result	4	1
Birth, death, wedding, etc.	3	0
Bad weather, bad roads, etc.	4	9
Indifference	10	20
	100	100

As has been said, the seasonal character of much of the non-attendance is readily observable. Autumn and spring absences may usually be traced to work, especially in rural and village areas. Winter absences are due to bad weather and colds. The cause of other conspicuous absence periods may be traced to epidemics of measles, scarlet fever, mumps, chicken pox, and in certain sections — notably in the South — to malaria. Attendance declines with the first warm days of spring because pupils have lost interest; a few drop out at or near the close of the year, also, on this account or because they are failing. The offenders

most troublesome are those who come a day or two and then stay out for as long a time. Both they and their parents are likely to be indifferent to education, and actual truancy, incorrigibility, and delinquency may be present. In the final analysis, a study of causes shows that some defy the utmost efforts of the school to remove them, and that there are others which may be overcome in part, if not wholly. The problem really takes on the following aspects:

1. How can the amount of sickness be reduced among the children and in the community?
2. How can relief be afforded to the poor, so that the children may not lack shoes and clothing?
3. How may non-attendance on account of work be prevented?
4. How may indifference and lack of interest be overcome?
5. How may the bad-road and bad-weather obstacles be removed?

1. Attendance and sickness. The subject of health education is taken up in the next chapter, and only a brief reference to it is made here in connection with attendance. It may be said first, that if a school nurse is available, pupils who are habitually tardy because of sickness should be reported to her. If not, the teacher should try to find time to visit the homes to observe conditions, and then later on make suggestions in her teaching or to the parent-teachers' association that will lead to improvement.

Second, health teaching should be strongly emphasized, especially with those who need it. In other words, the causes of non-attendance should occupy the attention of the teacher as continuously as the matter of attendance itself. Instruction in keeping well should be given all the time and in all grades, not merely in classes in physiology and hygiene as outlined in the course of study.

Third, the health program should be motivated by the determination to reduce diseases in the community to the

minimum. Health drives, campaigns against malaria, colds, and contagious and infectious diseases should be stressed. The teaching ought in most cases to result in action. As an illustration, suppose the seventh grade studies typhoid fever. While some time should be given to discussing the symptoms, the methods of transmission, and how to care for a person who is afflicted, it should be a main consideration to find out whether there are probable sources of contagion in the community. If malaria is present, a survey of the places where mosquitoes breed may be made, and suggestions given for oiling or draining the stagnant pools, water barrels, troughs, and water holes near the dwellings and the schools.

2. Attendance and poverty. The school cannot do much to relieve poverty. This is a relative term anyway. Some parents and children are so sensitive that unless they can dress as well as the best, bring fancy lunches, and keep the pace generally in a material way, they suffer acute mental anguish. The writers have known many children who refused to go to school because their clothing was patched or old, or because they were ashamed of their lunches. They have known others who stayed at home because they could not buy the pencils, books, or other equipment that the teacher insisted on their having. Then again, there are real cases of misery and poverty where clothing and shoes are simply not to be had. That kind is more common in the city than in the country. In the city, however, there are more relief agencies than there are in the country, and the teacher can report a case of genuine poverty to the Red Cross, the associated charities, the community chest, or to some fraternal or religious body. In the country relief agencies are few in number. Moreover, country people are likely to be very sensitive to anything approaching an offer of charity.

In dealing with cases where people attach undue importance to clothes and the like, the best remedy is to make the school so interesting, and to make such capital of personal qualities — leadership, industry, dependability, scholarship, or skill in games — that the pupil in question will sacrifice some of his pride in order to come to school. The teacher should report cases of actual need to some community organization, if there be one. The school nurse or the home teacher can attend to these matters better than any one else connected with the school. If there is no nurse, no Red Cross, and no lodge, the thing to do is to organize a parent-teacher association. Through its leadership, clothing, food, books, supplies, and a little money can be collected and dispensed where they will do the most good. The hot lunch furnished by the school is one of the best ways, in some communities, of stimulating attendance. The parent-teacher association, acting through a small committee, can often aid in finding employment, and also help to tide families over a period of misfortune induced by accident or sickness.

3. **Attendance and work.** At certain seasons farming communities depend upon children to help with the work, and in many cities and small towns there is a disposition to send the children into the shops, the factories, and the canneries. On the farms, child labor is in special demand during the planting and harvesting seasons. In cotton- and fruit-growing regions, the schools may be nearly depleted of the older pupils until the crops have been picked. If rains threaten the perishable crops, the need to use the children in harvesting is so great that compulsory school laws prove of no avail. In some instances, it is really better to close school for a few weeks until the rush of work is over. It certainly does not pay to appeal to the law in times of emergency, such as arise when crops are spoiling.

There is no need for mercy toward parents who would work their children the year round in fields and factories and deprive them of their chances for growth, happiness, and education, but one can scarcely indict an entire community.

Changes in the dates of opening and closing school have been put forward as one of the ways out of the emergency-work difficulty. In a fruit-growing section the opening of school might be postponed until November; in cotton-growing areas a recess might be taken for a few weeks. Where the picking season extends over two or three months, it may be well to have the annual vacation during the late fall-and-winter season. There is no good reason why school should not be held during the summer months. No pupil is going to suffer more from the heat in school and from school work than he will in the dusty lanes and fields of the country-side, and in the narrow streets and unventilated rooms of the city. A little useful work is good for children; the main concern is to protect them from exploitation and to see that they are not deprived of rightful opportunities for education. The law should take care of unprincipled offenders against childhood; for others, reasonable adjustments should be made in the school term and in vacations.

4. Bad roads and bad weather. Bad weather and bad roads naturally come together. The fact that they prevail mainly in special seasons, winter chiefly, is another reason why it may be well to consider shifting the school term to spring, summer, and autumn. A few schools count regularly upon proclaiming one or two "mud-and-storm vacations" during the year, perhaps at the beginning and the breaking up of winter. In rural schools, the teacher may suggest means for transporting, during the days of bad roads and bad weather, those children who live at the greatest distances. It is interesting to note that transportation is becoming a feature in many rural schools, teachers often

driving the cars that take children to and from school. In village and town districts pupils usually have no difficulty in getting to school, no matter what the weather may be, if they are sufficiently interested in their work to bear a little hardship.

5. **Keeping up interest in the school.** Time after time it has been observed that bad weather, bad roads, work, and poverty are not insuperable barriers to attendance; a real interest in their school life will cause many pupils to overcome obstacles that they would yield to if they disliked it. It is a fact that some pupils are better off at home doing nothing than in certain schools, and that still more profit by being put to useful work; but this is not a sound argument for allowing the neglect of attendance. Rather, it should be the purpose of the teacher to make the school so vital and attractive that pupils not only will not try to find excuses to stay at home, but when they have to stay there will do so unwillingly. Parents, too, should be so impressed with the advantages of school that only in extreme cases will they permit their children to stay away in order to work. An alive, attractive, and interesting school can always hold the attendance.

The first thing to do in keeping up the interest is to add features that interest the children. One of these is a strong social program. Children like to belong to clubs, to hold offices, and to share in informal group work. Glee clubs, nature-study clubs, dramatics, plays and games, athletics, recreational reading, and all such interests should be fostered. The celebration of special times such as Thanksgiving and Christmas bring children to school; they like to keep Saint Valentine's Day and Washington's Birthday. They like story hours, book weeks, and special periods for recreational reading.

The second thing to do is to vitalize the teaching. The

curriculum should be expanded as much as possible. There is no reason in the excuse that the teacher cannot bring in new materials because she has to follow the course of study. Most courses of study contain some useful and interesting material. There is usually room to introduce handwork, nature study, agriculture, drawing, music, domestic science, and shop work. Spelling and arithmetic may be motivated by games; reading and literature through clubs and the library. Projects and socialized class procedures help to get away from the dry formal recitations that depend upon questions and answers, topics, and memorizing. Greater freedom through participation in school government is a good supplement to these freer and less formal teaching methods.

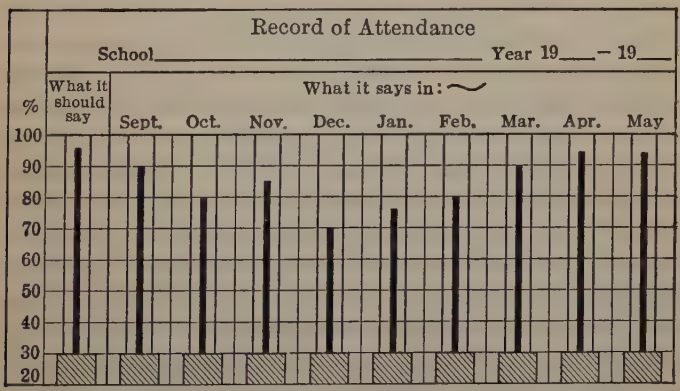

FIG. 3. THERMOMETER CHART FOR MOTIVATING ATTENDANCE

As soon as a live teaching and social program has been introduced, a drive should be made for better school attendance. A contest among individuals, among grades, or between the boys and girls may be arranged. A teacher who carried on such a contest put up a large card on the bulletin board for the weekly record of attendance. A vertical red

bar of gutta-percha stood for the boys, a blue bar for the girls. A scale at the left of the cards plainly marked the per cents from fifty to one hundred. From any part of the room the pupils could read the standings of the contestants. The values of regular attendance were given and all were asked to try to make a good showing. The contest lasted three months. On the last day, the winners were given special mention, their names were posted, and a program was arranged in their honor. The drive helped to establish habits of regularity, and its results lasted a long time. This plan may be carried out in many ways. Leaders may be appointed who choose their groups; awards such as banners, pins, or certificates may be given. The campaign makes pupils aware of the need of good attendance and its influence carries over into the home.

Finally, the home should be reached through the parent-teacher association. At one of the first meetings of this association, the facts and conditions of attendance should be presented, and some reference should be made to the importance of regularity. The reasons for absences might also be mentioned, with the suggestion that the association help, so far as is possible, to remove the causes. Little reference if any should be made to the compulsory school law. The object is to make attendance voluntary by building up the right attitudes and developing the right kind of school. Some parent may point out the arguments for good attendance, showing that it costs for the school to go on whether or not the children are there; that progress in the subjects is dependent upon the pupils' being present; that there are dangers in truancy and delinquency; and that the health and development of no child should be risked by keeping him out of school to do hard work. Last of all, an appeal may be made to pride in the school and the community.

Tardiness. Tardiness is simply a phase of non-attend-

ance. It differs from absence only in that it does not last so long. Fifty per cent of all cases of tardiness occurs during the first hour of the morning, ten to fifteen per cent during the next hour, and the remainder during the first hour in the afternoon. In rural schools, nearly all tardiness occurs in the early forenoon. The pupils who are absent the oftenest are the most frequently tardy, and among them, as might be expected, much the same type of excuse is given. Sickness of some member of the family, work and errands, "clock stopped" or "clock too slow" — these are usually the excuses given for tardiness. If transportation is afforded, the excuses are that the car was late, the bicycle broke down, a tire punctured, and so on.

As in the case of excuses given for absence, some of these are not real reasons for tardiness. It is easy for youngsters to get into the habit of loitering along the road and stopping to watch some interesting occurrence. In villages and cities a growing number of pupils are late to school because they stop to read the movie announcements or listen to radios. There are pupils who do not know how fast time is passing, and who are unconscious of everything but their immediate interest in flowers, birds, insects, or people. A little stimulus of an unpleasant sort may be necessary to wake up some of the dullest offenders, but one must take care not to act too severely, for the result of that will be that when pupils see they are going to be tardy they will stay at home. Everything that helps to build up attendance is effective in promoting punctuality.

Excuses. It is advisable for the teacher to insist upon excuses for absence and tardiness. The chief reason for this is that the excuse serves as a check between the school and the home. If no excuses are required, children may absent themselves pretty much as they please without their parents' knowledge. If they know that they will be checked

up for every day that they are late or absent, they will think twice before playing truant or loitering and wasting time on the road. Parents sometimes refuse to write excuses, or, when they do, tell the truth about absences, so that children hesitate to run the risks of exposure which accompany needless absences. The best way to secure replies from parents is to write on an excuse blank the name of the child and the date of his absence or tardiness. The pupil takes the blank home and returns it the next day with a statement written in, over the signature of the parent, of the reason for the pupil's delinquency. If there is some suspicion that the pupil is not taking the excuse blanks home, they may be sent through the mail with a self-addressed and stamped envelope enclosed. Excuses should be filed for the year. They reveal where preventive work is needed, and also they may prove useful evidence if trouble develops over any case of habitual absence or truancy. Parents will coöperate better in writing excuses if the reason for a check is explained at a meeting of the home-school association.

The example of the teacher. Good attendance can hardly be expected of the pupils unless the teacher sets the example. It is an actual fact that in some schools the average daily attendance of pupils runs higher than that of the teachers. Some teachers are habitually tardy, to their own disgrace and that of the profession. The average attendance of all teachers is about ninety-five per cent. One fifth of the teachers are responsible for nine tenths of the absences. Fifty per cent of the teachers of the country are never absent; some have taught for years without missing a day.

Sickness is the reason usually given for the absence of teachers. In schools where records have been kept, it is shown that the average number of days' absence is eight per year. The chief ailments responsible are nervous and

respiratory (sore throat, colds, and influenza). More absences occur on Mondays and Fridays than on any other days; the time indicates that many of these absences are unnecessary. Teachers have feigned sickness on Friday in order to begin their vacations a little earlier, or have misspent the week-ends so that they are really sick on Monday; sometimes they extend the holiday over into the new week. There are times when the teacher should not be in the classroom; on the other hand, she should never absent herself except when it is absolutely unavoidable.

Summary. School attendance is an ever-present problem. Good schools count for nothing if pupils do not take advantage of their opportunities. The compulsory school law fixes standards, but it is not the chief means to be relied upon for securing attendance. Its provisions should be well known to the teacher, but her aim should be to make attendance voluntary. The first step is to find out what are the conditions in the school, and to decide upon standards to which the attendance should measure. The next step is to analyze the causes of non-attendance, and, upon the basis of local conditions, plan a program of improvement. The chief causes of absence are sickness, work, poverty, bad roads, and bad weather, and lack of interest in the school. There is not much that the teacher can do to modify the effect of poverty, sickness, and bad weather, but she can make some adjustment that will decrease their injurious effects. Her chief concern should be to make the school efficient and interesting and to do what is possible to build up the confidence and coöperation of the parents. Last of all, she should see that in her own attendance she sets a good example of punctuality and regularity.

EXERCISES AND PROBLEMS

1. Show how the punctual and regular attendance of the pupils may be taken as a measure of the teacher's efficiency.
2. List the advantages and the disadvantages of apportioning the teacher's pay according to the number of pupils in attendance.
3. Give an illustration for each type of waste due to irregular attendance which was discussed in the chapter.
4. Give examples for as many as possible of the causes of irregular attendance listed in the text. Can you think of other causes than those mentioned?
5. List as many means as you can for preventing irregular attendance.
6. Outline the essential features of the compulsory-attendance law of your State.
7. List objections to granting half-holidays for perfect attendance. List objections to giving material rewards or prizes for perfect attendance, and for reducing standing in scholarship for poor attendance.
8. What are the objections to keeping tardy pupils out until the next session?
9. Give all the reasons you can why the punctual and regular attendance of the teacher is more important than that of a pupil.
10. Prepare a suitable little talk to give to your class on the importance of the habit of punctuality in the affairs of life.

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CHAPTER IX

THE INTERMISSION AND PLAY PROGRAM

The need of play. Play is a fundamental life activity. It is universal among the healthy normal young of all animals, and under the best conditions extends even into adult life. There is nothing in the curriculum that is more closely related to inherent tendencies, nor that gives such deep-seated satisfactions as play. It is in addition one of the strongest educational and disciplinary forces known. The play schools of ancient Greece were successful in stimulating all-around developments; our best modern schools have been distinguished by major emphasis upon play and the play spirit. Plays and games were outstanding agencies employed in the World War for transferring young Americans from civil to military pursuits; the result was the best army ever known. In school and in life a generous play program is justified both by its educational values and by its innate satisfactions.

School conditions are of such a nature as to necessitate occasional recreational periods. At such times pupils and teacher can obtain relief from unnatural postures and physical inactivity by vigorous exercise in the open air. Even in the old-time schools the recesses were ostensibly designed to serve the play purpose. Frequently they did not serve it very well, because the pupils were turned loose without the inspiration, guidance, and oversight of a leader. They were not given something worth while to do, and in consequence the school recesses became notorious as periods of disorder and chaos. Brutal fights, bullying, malicious mischief, and immoral behavior were only too frequent.

Many teachers wished devoutly that they might dispense with these "free periods" altogether and hold the pupils down to a strict regimen of work for the whole of the school day.

Duty of the teacher. Later experience has shown that it is not a difficult task to change all this. All that is necessary is to adopt an interesting program of plays and games, and then teach and supervise them as carefully as if they were classroom exercises. There is greater reason to-day for supplying play opportunities in the school than there used to be. The school year is longer, now, and the vacation time is shorter. Children do less work at home, and if they lack a knowledge of games and well-formed play habits they may spend their time in idleness or contract bad habits. If there is no play in school, the risk of fatigue, delinquency, overwork, and ill health must be faced. It is no wonder that the vote has gone forth strongly for play.

There are few schools where a teacher can escape both playground and physical-education duties. In city schools it is the practice to assign each teacher in turn to playground duty. At such times she may choose to act as playground policeman, to leave the children to their own devices, or to take a position of leadership. The result of the first course is depression of the play spirit and annulment of most of the benefits of the period; the second course means simply a return to the old recess situation; only the third takes full advantage of the possibilities of the playground. When the playground supervision is in the hands of a specially trained teacher, there still remains for the regular teacher the duty of taking charge of the physical-education activities carried on in the classroom. If the beginner is teaching in the rural schools, she must take full responsibility for both physical education and playground management. The need for preparation in either case is obvious.

Play objectives. Many objectives of play have already been stated — social, ethical, psychological, and educational. Achieving the values of these objectives is contingent, of course, on making the program genuinely vital. It must be interesting, it must be entered upon with enthusiasm, and it must be sought after because it is enjoyed. It must correlate with the general educational program, and, like that, promote natural and far-reaching development. Taking into account these principles and such special factors as arise out of individual needs and abilities, the objectives of the play program may be stated as follows:

1. To afford relief from the confinement and unnatural restraints of the typical classroom
2. To afford an opportunity for the expression of special abilities
3. To teach habits of leisure-time enjoyment that will carry on into adult life
4. To add to daily enjoyment
5. To develop qualities of leadership
6. To train in courtesy, character, and coöperation
7. To promote physical health and vigor

Motivating play. In the face of the assertion that the desire to play is universal, it seems absurd to maintain that it must be motivated. Nevertheless, this is essentially true. The reasons are not far to seek. In many cases the play impulse has been suppressed in home and school; in many cases it has not been given a favorable opportunity to grow. In the most enjoyable play exercises — organized games — no matter how great the inner drive, the rules and technique have to be learned. The teacher's most difficult task is to get children over the initial stage of mastering rules, and acquiring the simplest elements of skill. Some children are timid about playing with others, and fairly strong motives may have to be roused in order to get them started. This is more likely to be the case with older children who have never

played than it is with little folk who have not yet become self-conscious and afraid of seeming awkward. A few appeals which are worth trying are:

1. The use of rivalry, as team against team, or class against class
2. The conferring of awards, such as letters, cups, badges, pins, certificates, stars, honor points, and banners, upon winning teams and individuals
3. The use of achievement-scoring on a point basis, by means of which all who compete receive some credit
4. The development of the ideal of good sportsmanship
5. The assignment of leadership and helping positions
6. Inculcation of the idea that play adds to health, happiness, and good looks

Need of a play program. Some people doubt the advisability of having a play program. They maintain that spontaneous play is what is wanted, and that this can never be had by putting down and executing a schedule, as in the classroom subjects. Play, they say, is not play if it is forced or if it is too rigidly controlled. The experience of playground directors, on the other hand, shows that without organization children do not play effectively, and that most of the values are lost through contentions, lack of snap, and unfair distribution of facilities. If the playground is to be merely a place of amusement a program is not especially needed; if it is looked upon as a place where moral ideals are to be developed and beneficial physical results to be achieved, a program is essential. Experience seems to show that children like to go where there is the greatest activity. They like to follow laws and rules. They like to play under the supervision of an interested teacher.

When it has been decided that a play program is necessary, the first and foremost problem is to prepare the play curriculum: what games, what activities? Here is where the teacher will have to work more or less independently, be-

A Protected Place is Desirable for Ring Games

cause no one has arranged for play such well-selected materials as can be found in spelling, reading, and arithmetic. Individual differences, also, seem to be more pronounced in play than in the regular subjects. The same pupils who accept, without much question, whatever the teacher puts before them in arithmetic, spelling, and reading, will reject her play program. The basic principles to consider are:

1. The likes and dislikes of the children
2. The educational connections and implications
3. The after-school and adult-life uses of the activities
4. The adaptability of the play to the local situation: climate, season, space, and equipment
5. The physical needs

It has been said that the modern school's play program has grown by introducing in order: (1) athletics; (2) playground games and play with apparatus; (3) educational recreation such as manual and social activities; (4) better-health activities; and (5) exercises intended to correct physical defects. A program embracing the first four divisions might include:

1. Play upon swings, slides, teeters, and other apparatus
2. Playing in the sand pit and in the wading pool
3. Running, dancing, and singing games
4. Ball games, running, throwing, and similar athletic events
5. Nature activities, such as gardening, collecting, and hiking
6. Social activities, such as dancing, story-telling, and singing
7. Wood work, basketry, and other forms of handwork
8. Holiday and special-day programs
9. Rainy-day programs, including dominoes, checkers, crokinole, authors, puzzles, and lotto.

Apportioning play space. After the general range of activities has been settled on, the next step is to divide the play space in some suitable manner. It used to be the custom to make the division on a sex basis, giving one side of the grounds to the girls, the other to the boys. A little later it

became the custom in the city schools to divide the space on the basis of grades, giving one part to the little children, and the other to the large ones. The ends desired may be better attained by apportioning on the basis of activities. By this plan, one portion of the entire space is given over to apparatus — swings, see-saws, slides, and sand pits; another to ring and singing games — London bridge, farmer in the dell; another to running games — prisoner's base, stealing sticks, tag; and another to competitive games and track events — basket-ball, baseball, sprints, and jumping.

The apparatus and the sand pit should be located in a sheltered spot, where the children will not be exposed to too much sun and wind and will be out of the way of runners and safe from stray balls. In the best-managed playgrounds, swings and teeters are put inside little wire-enclosed courts, since there is danger that children will run into the apparatus. The ring and singing games should be assigned a level and protected space near the building, since they are usually patronized by the little children. The games-and-sports field may be farther away — a plan that makes for the safety of the younger children and of the building. If the grounds are too small to allow divisions, the different types of activities may be scheduled for different hours and days. For example, running games may be played one day, ball games the next, track events the next, and so on.

Play equipment. It is a big problem to secure the necessary play apparatus and equipment. The school board ought to supply what is needed out of the regular budget, but if it will not, there are two courses open to the teacher. One is to go to other sources for help; the other is to plan a program in which no equipment is needed. Means for raising money are drives for paper, rags, and junk; paid entertainments and subscription lists; and, best of all, an appeal to the parent-teacher association. Once in a while

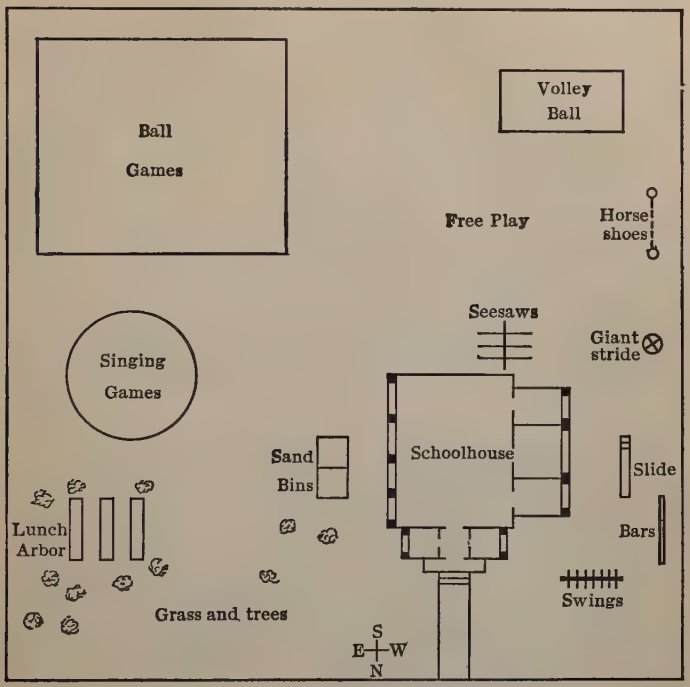

FIG. 4. A PLAYGROUND LAYOUT FOR A SMALL SCHOOL

the pupils may make a little of the apparatus. In the list of references at the end of this chapter will be found two good articles which tell how to make the more common types of play apparatus. If two or three good pieces can be added every year, before long the grounds will be well supplied. The list of apparatus which follows is put in the order of pupils' preference as generally expressed:

1. Sand piles
2. Slides
3. Swings
4. Seesaws
5. Merry-go-rounds
6. Wading pools
7. Horizontal bars
8. Climbing poles and ropes
9. Sliding poles
10. Inclined ladders

The school board ought also to supply the play equipment. Every teacher has seen what happens when the pupils furnish the bats and balls. The owners tend to dominate the play schedule; they give themselves the choicest positions, and they decide who shall play and who shall not. The children who most need play may be shut out entirely. The teacher should take this matter up with the parent-teacher association as soon as possible. She should have a small budget out of which to buy what she needs. If compelled to choose between apparatus and equipment, she should take the latter. A list of articles from which to choose, sufficiently long for quite an elaborate play program, is here given:

1. Indoor baseballs and bats
2. Volley-ball net and balls
3. Basket-ball goals and ball
4. Soccer ball
5. Horseshoes
6. Croquet sets
7. Dominoes
8. Modeling clay
9. Roller skates
10. Building blocks
11. Flags for use in drills
12. Marbles
13. Tennis net and balls
14. Archery targets, bows, and arrows
15. Hockey clubs and balls
16. Checkers
17. Jackstones
18. Jumping ropes
19. Tops
20. Bean bags

Games without equipment. If apparatus and equipment are not to be had, the thing to do is to prepare a play program in which they will not be needed. This is not so difficult as at first thought it might seem. The children can suggest many activities, and many others are described in playground books and magazines. Many are worth adding to the program even when apparatus and equipment are available. The following activities are cited:

1. Snow modeling
2. Sand craft
3. Hopping bases
4. Wand race

5. Folk-dance contests
6. Morris dance
7. Stealing sticks
8. Prisoner's base
9. Blind man's buff
10. Wolf
11. Relay race
12. Fence tag
13. Black bear
14. Up Jenkins
15. Poison snake
16. Oyster shell
17. Fox and geese
18. Ruth and Jacob
19. Bird catcher
20. Hopscotch
21. Green gravel
22. Kick the can

By including games that require a minor amount of equipment but make no demands upon special apparatus, the list could be made much longer. Some games which have project features and are stimulating to children's interests are:

1. Whittling
2. Radio making
3. Doll show
4. Pet show
5. Pushmobile races
6. Stilt-walking contest
7. Marble tournament
8. Top tournament
9. Lantern parade
10. Harmonica contest
11. Ukulele contest
12. Jackstone contest
13. Skaters' parade
14. Horseshoe pitching tournament
15. Bean bag tossing tournament
16. Flag relay
17. Rope jumping
18. Mumble peg
19. Dodge ball
20. Baseball throw

Favorite games. Success in play management depends to a great extent in finding activities which the children like. Simply putting games on the schedule is no guarantee that they will be played with enjoyment. There are a few stock popular games in every school, some of them popular because they are familiar. The teacher should make use of the local favorites, but should at the same time extend the interest by bringing in new games. Games that have proved favorites with children everywhere are grouped in the list which follows:

1. Farmer in the dell
2. Hickory dickory dock
3. Carrousel
4. Looby loo
5. Schoolroom tag
6. Relay races
7. Basket-ball
8. Drive a peg
9. Volley ball
10. Stand dodge ball
11. Playground ball
12. Center ball
13. Hill dill
14. Stealing sticks
15. Prisoner's base
16. Fox and geese
17. Three deep
18. Skipaway
19. Bull in the ring
20. Bear in the pit
21. Beetle goes round
22. Captain ball
23. Soccer baseball
24. Three old cat

Nature activities. Nature activities are fully as fundamental in their appeal as are active games. They are one of the main sources of the strength of the Boy Scouts, Camp Fire Girls, and Industrial Clubs, and in their educational advantages are not excelled by anything. They may be merged into the regular instructional program of the school, may be used to vitalize the teaching of many subjects, and may help to fix desirable habits and attitudes. Special interests and talents may be brought out by them and leadership traits developed. Although a nature-play program should be adjusted to the locality, and to the age and interests of the pupils, it would in general include:

1. Gardening, canning, and taking care of animals
2. Making nature exhibits of stones, dried grasses, leaves, pressed flowers, birds' nests, growing plants, oddities of nature, shells, and aquaria
3. Hikes to study trees, shrubs, flowers, water creatures, and land and water forms
4. Identifying birds and animals
5. Make nature scrapbooks
6. Identifying flowers, leaves, and seeds
7. Woodcraft
8. Campcraft
9. First-aid and safety precautions
10. Studying animal lore and telling animal stories

Seasonal activities. The schools in which beginning teachers work do not, as a rule, have covered play space and gymnasiums, and in consequence the play program has to be varied with the seasons. Some games belong to autumn, some to winter, and some others are appropriate for spring. By taking advantage of seasonal opportunities, the teacher may compensate for a shortage in, or a lack of, equipment, and may prepare a play program that is original, interesting, and suited to the locality. The list of suggestions which we give is broad enough to suit areas where seasonal changes are marked. The activities may make up the basic play program, or may supplement and motivate the state course in physical education. Commencing with September, we have:

TABLE IX. A SEASONAL PROGRAM OF PLAY ACTIVITIES

September	*February*
Picnic	Stunt day
Bonfire	Soap-bubble party
Lantern parade	Washington's Birthday
Flower show	Lincoln's Birthday
Better-health week	Valentine party
Labor Day	Bean-bag contest
Running games	Indoor games
October	*March*
Halloween parade	Gymnastic exhibition
Home-gardens exhibit	Marbles tournament
Columbus Day celebration	Social games contest
Football	Minstrel show
Basket-ball	Music festival
Soccer	Phonograph concert
Hikes, woodcraft, campcraft	Scrapbooks
November	*April*
Story-telling contest	Kite tournament
Thanksgiving celebration	Top tournament

November	*April*
Football	Clean-up week
Soccer	Doll show
Basket-ball	Track events
Animal lore	Arbor Day
December	*May*
Debates	Baseball
Christmas celebration	Track events
Better-English week	Volley ball
Basket-ball	Home-gardens week
Running games	Horseshoe tournament
Tracking and hiking	Nature collections
January	*June*
Winter carnival	Baseball
Snow sports	Volley ball
Sled races	Play festival
Skating events	Outdoor dramatics
Out-of-doors day	Badge test
Clay-modeling contest	First aid

Grading play activities. Play needs to be graded almost as systematically as do spelling, reading, and arithmetic. This is because there is not only a great deal of difference in the ease with which different games may be learned, but also because some games are less appropriate than others to the stage of development which children have reached. Tradition and custom also play their part in determining which games children will enter into with zest and which ones they will reject. Probably little boys have as much inherent liking for dolls as have little girls, but they soon learn that it is not the thing for boys to play with dolls. The modern tendency is to discount more and more the old idea of sex differences; to-day girls play games that used to be reserved for boys. Moreover, under favorable conditions, larger boys and girls will play games which playground

WHAT THE WINDS DO FOR US

(First-grade work)

authorities have assigned to little children — singing games, for example. These older pupils' appreciation of the games is not spoiled by what others think about their fitness; they play them because they get real enjoyment out of the activity. They also play them because they want social contacts. So strong is the social impulse in children that all play schedules should allow for it and stress group activities and team games.

The outline which follows contains groups of play activities, each listed under the grade where those particular activities may be taught successfully. There is, of course, much overlapping. Some games are appropriate for four or five grades, and some have very little adaptability. In small schools, the latter type are not of much value because they are mainly individual.

Table X. A List of Play Activities, by Grades

First and Second Grades

Apparatus: sand craft, slides, teeters, swings, and wading pools.

Singing games: ring around the rosy, farmer in the dell, London Bridge, here we go round the mulberry bush, looby loo, I went to see my friend one day, and here we go gathering nuts in May.

Dances: maypole dance, carrousel, nixie polka, tailor's dance, shoemaker's dance, chimes of Dunkirk, and mother's little pigs.

Running games: hill dill, wood tag, flag relay, blind man's buff, hide and seek, puss in the corner, cat and mouse, fox and geese, skip away, and drop the handkerchief.

Ball games: center ball, teacher ball, three old cat, bean bag, pass the ball, and kicking the football.

Nature activities: naming leaves, flowers, shrubs, birds, and trees; nature stories; first aid; and woodcraft.

Social activities: keeping store, keeping house, dolls, singing, and dramatics.

Hand work: sand craft, blocks, modeling clay, scrapbooks, and nature exhibits.

Miscellaneous: climbing, jumping the rope, ring toss, jackstones, skating, coasting, and rolling hoops.

Third and Fourth Grades

Apparatus: slides, teeters, swings, horizontal bars, climbing poles and ropes, inclined ladders, and merry-go-rounds.

Singing games: London bridge, farmer in the dell, looby loo, greeting and meeting, the gay musician, on the bridge, and I took a walk one evening.

Dances: folk dances, Swedish, Danish, and Irish.

Running games: tag, hill dill, stealing sticks, prisoner's base, three deep, skip away, fox and farmer, wood tag, drop the handkerchief, cross tag, poison, and dare base.

Ball games: three old cat, bean bag, captain ball, keep ball, balloon ball, number ball, pass ball relay, and corner ball.

Field events: potato race, flag relay, spoon race, hopping race, all up relay, and shuttle relay.

Nature activities: nature stories; identifying leaves, plants, flowers, seeds, shrubs, and trees; gardening; aquaria; collections; making nature scrapbooks; nature exhibits; woodcraft; campcraft; and first aid and safety.

Social activities: checkers, keeping store, dramatics, singing, clubs.

Hand work: sand craft, weaving, wood work, clay modeling, and paper cutting.

Miscellaneous: marbles, tops, jackstones, jumping the rope, kite flying, hopscotch, coasting, skating.

Fifth and Sixth Grades

Apparatus: swings, bars, slides, climbing ropes and ladders.

Singing games: London bridge, green gravel, dusty miller, I took a walk one evening.

Dances: tarantella, maypole dance, morris dance, Scotch reel, and mountain march.

Running games: drop the handkerchief, blackman, dare base, prisoner's base, wood tag, cross tag, three deep, hare and hounds, duck on the rock, and relievo.

Ball games: end ball, dodge ball, rounders, indoor baseball, tip cat, keep ball, corner ball, volley ball, basket ball, captain ball, and soccer.

Field events: sixty-yard dash, running broad jump, high jump, relays, distance throw, accuracy throw, obstacle race, and spoon race.

Nature activities: same as for third and fourth grades.

Social activities: parties, dramatics, singing, clubs.

Hand work: wood work, clay modeling, scrapbooks, and exhibits.

Miscellaneous: marbles, tops, horseshoes, archery, jackstones, kites, skating, jumping rope, stunts, cross country running, and coasting.

Seventh and Eighth Grades

Apparatus: swings, bars, climbing ropes and ladders.

Singing games: same as for fifth and sixth grades.

Dances: folk dances of all kinds, and simple social dances.

Ball games: baseball, soccer, basket ball, volley ball, end ball, dead ball, round ball, town ball, dodge ball, captain ball, and battle ball.

Field events: sprints, jumping, weight throwing, ball throwing for distance and accuracy, relays, novelty races, and cross country running.

Nature activities: campcraft and woodcraft, especially as organized in scout work; industrial club work, collecting, identifying leaves, plants, trees, birds, and flowers; and hiking and excursions.

Social activities: clubs, dramatics, parties, and community singing.

Hand work: same as for fifth and sixth grades.

Miscellaneous: hockey, tennis, horseshoes, hat ball, sketches, circus, and charades.

Directing the playground. The duties of the teacher in charge of the playground are many. Her first function is to teach games and instruct in the use of the apparatus. Her second duty is to see that the rules are obeyed, act as umpire in contests, adjust disputes, and see that the program is fairly executed. A third duty is to inspire to take the initiative, to encourage and reward merit, and to fill the program with sufficient spirit and action as to prevent it from becoming perfunctory and formal.

Teaching games is much like teaching classroom subjects. The teacher should first know what she wants to do. She should pick out a few of the essential elements of the game for the first lesson; the refinements may come later. It will

help exceedingly if she is skilled in the games herself, but this is too much to expect when we consider what a large number of activities will be required. When the beginner finds it necessary to teach a game she does not know, her best plan will be to pick out a few of the most willing and capable children, and work with them first. As soon as they learn the rudiments, they may be directed to teach others. The use of pupils as assistants is at all times worth while in managing play routine.

Play rules. Although teachers are cautioned against making long lists of rules, experienced playground directors have found that it pays to have an understanding on many points. The rules may be worked out by a pupil committee, and should cover such routine matters as keeping the grounds free from trash and rubbish, caring for equipment, guarding against accident, division of the grounds, use of apparatus, care of the buildings, and duties of leaders. The rules should grow out of local conditions. After they have been prepared, they should be put into writing and posted in conspicuous places around the grounds and in the schoolhouse.

Another type of rules have to do with character building. They concern personal attitudes and relationships. Rules of this kind should be drawn up and adopted by the pupils, because in that way they will the more clearly reflect their ideals and be more strongly backed by public opinion. As a model for inexperienced pupils, we quote the *Five Rules of Sportsmanship* adopted for the schools of Missouri:

1. **The first rule of sportsmanship is courtesy to your opponent. Be a gentleman or a lady, and treat your opponents as ladies and gentlemen.**
2. **The second rule of sportsmanship is to play the game according to the rules. Play fair.**
3. **The third rule of sportsmanship is to abide by the decisions of the umpire, without remarks or heckling.**

4. The fourth rule of sportsmanship is to be a courageous loser, and not to lose heart when the score goes against you. Play your best to the end. Have grit.
5. The fifth rule of sportsmanship is to be a modest winner. Do not boast over your victories. Cheer your opponents.

Measuring results. Once or twice a year some measurement of the results of playground instruction should be taken. Some of the tests which may be used are:

The standard decathlon as worked out in the public schools of Detroit, or by the State Board of Education, Sacramento, California.

The athletic badge tests. Bulletin 105 for boys, and 121 for girls, Playground and Recreation Association of America, New York City.

The Public Athletic League badge tests, Baltimore, Maryland.

The age-aim tests of the Philadelphia public schools.

These tests may be found in the manual *Recreative Athletics*, published by Community Service, New York City; and in J. F. Williams's book, *The Organization and Administration of Physical Education*. The latter gives standards and suggestions for administering these and other tests. The little manual on athletics contains directions for organizing field meets, and gives lists of winter sports, water sports, rules for tournaments, and a large amount of other valuable information for the playground teacher.

The annual field day, play festival, or athletic meet furnishes a check on progress and gives incentive to further effort. In recent years, these have been held on an increasingly large scale, all the pupils of a county sometimes participating. Under these circumstances, the local school meet serves as preparation for the larger event to follow. A hopeful sign in such meets is the lessened emphasis placed upon athletic events, and the increase in variety of events, with a correspondingly greater opportunity for general par-

ticipation in the activities and for recognition of all. The program of events which is given here was used on the annual field day and play picnic of the schools of a Western county, and is suitable for a small school:

1. Flag raising, marching, flag salute, and patriotic songs
2. May pole dances
3. Captain ball
4. Singing games
5. Potato race
6. Sprints
7. Prisoner's base
8. Folk dances
9. Baseball and basket-ball throws for distance and accuracy
10. Ring games for little children
11. Flag relay races
12. Jumping contests
13. Miscellaneous games (volley ball)
14. Exhibit of handwork and nature activities
15. Pageant
16. Awards of ribbons and prizes

Summary. Much of that variety which is the spice of life inside and out of school can be obtained through play periods. No matter how well managed the schools are nor how vital the daily program, the pupils will need play. If the play program is to be successful it must consider the likes and dislikes of the children, and must be sufficiently diversified to meet changing interests. A program and daily schedule of activities is desirable. The types of activities may be classified as play upon apparatus, group and team competition, social games, handwork, nature study, singing, running, and dancing. The play space should be laid off to accommodate the activities put into the program. While apparatus and equipment are desirable, the lack of them should not prevent play. The final step is to grade the activities to the needs, interests, and abilities of the pupils, much as materials are graded in other subjects; then the games and activities should be taught and practiced, with pupils helping in the work of instruction.

EXERCISES AND PROBLEMS

1. Assume that the only purpose served by play is to make school more pleasurable to the children; would it be justified? Discuss.
2. Show why it is advisable to supervise and direct the play activities.
3. Compare the objectives of play with the objectives of the social sciences. How are they alike? How different? Is the one kind less indispensable than the other? Discuss.
4. Why should every teacher have some training in managing play activities?
5. Discuss the relative merits of apportioning play space: (1) on the basis of sex, (2) on the basis of age and grade, and (3) on the basis of activities.
6. What reasons can you give why the school authorities should furnish the playground equipment?
7. Point out the educational values in a play schedule of nature activities.
8. Criticize the seasonal play program on pages 157–158 as applied to your own community. What changes would you make?
9. Examine the graded list of games and play activities on pages 159–161. Where could one find how to play the games there given?
10. Make up a list of books that would be most helpful to the beginning teacher in charge of playground periods. What magazine would you recommend to her?
11. How does teaching children to play basket-ball or a similar game differ, in any essential way, from teaching them how to read, spell or write? Would the same psychological principles apply to the two procedures? Would motivation be as necessary in the one as in the other?
12. Make a list of subjects which in your judgment should be covered by playground rules.

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CHAPTER X

SCHOOL AND COMMUNITY RELATIONSHIPS

Need of team work in education. In the American school system, team work is all important. The business of teaching is too big an undertaking for individuals working alone. The best teacher is likely to be the one who combines her effort with the effort of many others. She coöperates with other teachers in maintaining order, in managing the playground, and, where there is departmental teaching, in making the daily program and even in actual instruction. She has to work with the principal in carrying out the rules and regulations of the school board, in preparing courses of study, in planning entertainments, and in safeguarding school property. The school board is likewise interested in having teachers that will help carry out the general plan. Last of all, the larger interests of the whole community also have a claim upon the teacher's spirit of loyalty and coöperation.

Of all the teacher's coöperative relationships, none are more important than those with the school authorities: the principal, the superintendent, the supervisors, and the school board. These relationships are of two kinds: direct and indirect. In a rural school district, all the relations of the teacher with the school board are direct; she confers with the members about supplies, keeping the building in repair, the length of the school term, her own salary, and the janitor's work. She has direct relationships also with the county superintendent of schools and the school supervisors. She talks with them about the courses of study, the classification and promotion of the pupils, the giving of tests, the making of reports, and the planning of the community

activities. She asks their advice on all matters pertaining to the school. The teacher who can thus secure assistance in handling her problems is much more likely to succeed than one who has to depend upon herself.

City school relationships. In a city school system, all questions that pertain to salary, tenure, position, supplies, and governing rules are taken up with the school board by the superintendent of schools. The teacher here should not confer with a school board member on any matter of school policy. If she wants an increase in her salary or a transfer to another position she should consult the superintendent. Even if she knows a member of the school board well, she should not discuss with him any matter affecting her own interests. If she does, she violates the ethics of the teaching profession and puts herself under suspicion of wanting to use "pull" or to make use of political influence.

When working under a school principal, the teacher ceases to have many direct relationships with the superintendent. She may confer with him occasionally on such professional matters as salary, promotion, and transfer, but most of her relationships are with the principal of her building. She should take to him her questions on discipline, methods of instruction, supplies, backward pupils, promotion, and community affairs; and if he is the right kind of person, she may talk with him about her personal affairs. She should follow the rule of going to the person who is responsible for the particular thing in which she is interested; she should not go over his head and appeal to a higher authority, except, of course, when she is being treated unjustly or when she is confident that abuses exist. Then it is wise, before taking action, to consult with some older person in whose discretion she has confidence.

Attitudes and problems. A good wholesome attitude toward school affairs and toward life in general is more to

be desired in a teacher than superior intelligence or a college diploma. At the top of the list of qualities that affect cooperative relationships is the desire to learn. This desire will keep a teacher from making the same mistake over and over again — and it is well to remember that repeated errors are unforgivable. Next in the list comes willingness to help — to do a thing readily when asked and occasionally to volunteer service. The third essential is to do cheerfully whatever one does and avoid criticism of others. In respect to the last point, a successful teacher recently said, "I have made it a principle all my life never to tell a person anything said about him by another that did not reflect credit on both." The fourth requisite is to have faith in the school, for, if one does not believe that what he is doing is the most vital thing under the sun, his work will not bring out his best efforts.

It is possible to put these qualities into practice in carrying out the simple commonplace activities of everyday school life. Some of these duties gain their importance through the fact that the educational work of the school depends upon their being well done; some are important because they make a link or two in the whole chain of cooperative tasks; some count a great deal because of their influence upon other of the teacher's interests and abilities. Which type is most important depends to some degree upon the point of view of the authorities. There are principals and superintendents who will overlook a late report but who cannot tolerate a teacher's being tardy at meetings. Examples of coöperative duties which devolve upon every teacher, are:

1. Making reports
2. Attending and participating in meetings
3. Holding conferences
4. Managing discipline
5. Criticizing others
6. Following suggestions
7. Following instructions

1. Making reports. State laws and school regulations specify that teachers shall make reports at certain intervals, usually monthly and annually. The facts furnished by the teacher are compiled by the school clerk, principal, or superintendent into a combined report which goes first to the county and then to the state superintendent of schools. The facts in the reports are used for several purposes: to check the efficiency of the school, to indicate whether the school laws are being obeyed or not, and to furnish a basis for apportioning school money, books, and supplies. A stated time is given by the end of which all reports must be on file, and of course all reports must be in before a combined report can be made. The school clerk, the principal, and the superintendent cannot make their reports until every teacher has sent in hers.

It is easy to see what happens when a teacher delays her report. The principal can do nothing with his, the superintendent is held up, and the state office begins to wonder at the delay. If still nothing is done, the state office criticizes the superintendent, the superintendent calls the principal to account, and the principal has a just cause for finding fault with the teacher who is responsible. If this neglect becomes habitual, he stops trying to improve her, and, as soon as he can, gives her position to some one else. Almost as bad a mistake as delaying is sending in a report that is inaccurate, incomplete, and untidy. If the principal sends such a report back to the teacher for correction, that means more delay. If he makes the corrections and additions himself, he inevitably forms a poor opinion of the teacher's ability. Every beginner should resolve, "I will make my reports promptly and accurately, and will supply all the information asked for."

2. Teachers' meetings. Teachers' meetings are held for both business and professional purposes. In business

meetings, instructions are given on grading, attendance, classification, supplies, library books, reports, and holiday observance. Their chief purpose is to insure that all the teachers will do the same routine things in the same way; it saves time to talk to all rather than to one at a time. Professional meetings are for the purpose of supervision, and if well managed are a great help to every teacher. At these conferences teachers may exchange ideas, hear lectures from experts, observe demonstrations of good teaching, and develop new plans and methods.

No teacher should be excused from a business meeting. The meeting should begin on time, and it should be held only when necessary. If one teacher is late, the whole group has to wait until she comes. We have seen fifteen or twenty teachers waiting, at a business meeting, for one. When the laggard at length arrived, her excuse was that she had to keep a boy in after school. Some teachers forget to come and have to be sent for by special messenger. Just as in the case of delayed reports, there is no acceptable excuse for tardiness and absence at business meetings. Everything else should be put aside for the time being. Pupils can be kept in another day, and the preparation of tomorrow's lessons can wait. Here is a good chance to cultivate the habit of punctuality and to make a good impression upon one's associates.

The obligations to attend professional meetings regularly and on time are just as great. Perhaps there is no better place than the professional meeting for testing professional attitude and interest. For example, some teachers are very enthusiastic about institutes. They have obtained help and inspiration from the lectures, the music, and the demonstrations. Others claim to be bored by the programs and are obviously depressed and critical. The explanation is the one group has brought more to the meet-

ings than the other. One group is wide awake and intelligent, the other is stupid and sleepy. Probably there is no professional program so poor that every teacher could not get something worth while out of it if she tried, and yet there are teachers who criticize the program committee, the superintendent, and the lectures; some even ask to be excused from attendance. This last action is an especially bad sign: no good teacher will ever ask for special exemptions or special privileges.

3. **Conferences.** There are two parties to a conference; the teacher, and the principal, superintendent, or some other school official. The conference is called for the benefit of the teacher; her problems and her point of view are to be considered. The first step to take in a conference is to state definitely what the problem is. If it has arisen, for example, from criticism or suggestions of the principal, the teacher should request his point of view and should ask any necessary questions until she thoroughly understands it. If she has come requesting help, she should state her problems clearly but briefly. If she has a solution, she should propose it; if not, she should say so and ask for advice.

After the issue has been stated, it is open to discussion. The teacher may follow the lead of the principal, trying to get as many suggestions as possible. When suggestions are given, she should make a note of them, and should ask questions about any that are not clear. If the question is one that requires a long time to answer, it is often better to ask, "Where can I get help on this?" and to leave it to the principal to suggest sources of help or give the facts himself. A few additional points to observe may be summarized as follows:

1. Do not say anything that reflects discredit upon the person with whom one is in conference — that is, that brings into question his knowledge, his good intentions, or his interest in the subject.

2. Maintain the inquiring attitude; act as if you wanted to learn.
3. Do not offer many excuses, such as lack of time, unintelligent pupils, lack of equipment, and inferior previous teaching.
4. Do not engage in controversy over any matter. State your point of view, but if the other person differs with it, do not argue the matter.
5. Try to show that you are interested.
6. Don't talk too much about yourself; keep to the topic of the conference.
7. Don't prolong the discussion too far; thirty minutes is about right.
8. If a question arises which you feel unprepared to answer, ask for a little time for consideration.

4. Discipline. A good many disciplinary problems demand coöperation in their solution. In general, the first rule is that the teacher shall handle all minor matters herself, and that even in the more important situations she shall be sure, before calling for aid, that her own resources are inadequate. If it appears from the start that assistance will be necessary, it is better to talk the matter over with the principal before taking any other action. Now and then there is a teacher who acts hastily, perhaps administering severe punishment for a minor offense, and then has to ask the principal to help her out of a difficulty. Her course should have been to have his advice before she did anything. The second rule is that the teacher should know how much help the principal will be able to give her in handling discipline. She should understand that she may not leave the whole problem to him, and that it is a mark of weakness to call upon him for too much. The limits of his assistance are outlined as follows:[1]

1. Helping to fix acceptable standards of behavior, so that the teacher can tell when order is good and when it is not

[1] Some of the help given by a principal in a city or village school may be obtained in a rural school from the county superintendent or supervisor.

2. Building up the school spirit, so that the pupils generally disapprove of improper conduct
3. Giving advice in dealing with special cases
4. Helping directly in dealing with cases where pupils of two or more rooms are involved
5. At rare times administering punishment at the request of the teacher
6. In serious cases, being present while the teacher administers punishment
7. Getting at the causes of bad conduct and removing them: for example, the principal may suspend a bad pupil.

Some of the things which a teacher should not expect the principal to do are:

1. Take charge of the order and management of her room
2. Administer punishment on her request without investigation
3. Support her to the limit when she is manifestly in the wrong
4. Believe she is a good disciplinarian when she calls upon him continually for help in managing her pupils
5. Countenance disorder, inattention, neglect of school tasks, and general misconduct on the ground that the teacher believes in a large measure of freedom for the pupils.

5. Criticism of others. It is a standing joke among administrators that teachers are pretty sure to blame their failures on some one else. This may be the previous teacher, the parents, the pupils, or, sometimes, the principal. It is not good policy to offer such excuses, and usually they are not authentic. No one person can honestly take all the credit for the good traits shown by a group of children; similarly no one person can be blamed for all their shortcomings. A teacher who in September says that her pupils are low in arithmetic because they were not taught well the year before forgets that three or more months have gone by since the close of school, and that in three months children may forget more than half of what they learned during a whole year.

Criticism should be indulged in sparingly in any case, and not at all to the general public. Most of the views which parents hold of the school and of education come from what teachers and other school authorities say. If these persons put the school in a favorable light, the patrons will believe in it. If they do not, it will be hard to convince the public that the school is on a sound basis, and in time it may refuse to support it. This is not to say that the teacher is to remain silent under actual abuses, but if there are abuses, she should take her facts to responsible authorities and not divulge them to every gossip in the community. She should use an optimistic tone when speaking of the school to outsiders; it should be her habit to lay emphasis on the strong points in the existing program and speak hopefully of contemplated improvements. There is no record of any public school so bad that nothing good might be said about it, but at any rate, if the teacher finds boosting inconsistent with her principles, she can safely keep silent. "Least said soonest mended" is a very serviceable motto.

6. Following suggestions. Principals and superintendents often judge teachers by the extent to which they respond to supervisory suggestions. By this term is meant an indirect way on their part of giving advice, orders, and instructions. The suggestions may be expressed as questions: "Miss Brown, don't you think it would be a fine thing to have the children work out a project on California missions?" "Perhaps it would be better to have the arithmetic class remain at their seats, instead of having them pass to the board"; or "I wish some one would try the Dalton Laboratory Plan."

There are several things to be said as to suggestions. They are more or less a test of the teacher's alertness and initiative. They measure her willingness to try new ideas. On the other side of the picture we should note that many

suggestions are made which do not fit local situations, some are not clear, and some have been tried and found wanting. A wise supervisor takes this attitude: "I will make suggestions, but I will not blame a teacher if she does not follow them." The teacher, on her part, should invite suggestions, take note of them, develop any that seem promising, and finally give them a trial. If she fails to understand a suggestion she should ask for further information; if a suggestion is repeated the teacher should always follow it, or else explain why she has not done so.

7. Following instructions. Instructions are frequently issued by school authorities. They are usually in written form and should invariably be followed. They may be concerned with the dismissal of pupils, as, "Pupils shall not be dismissed early except with special permission of the superintendent"; with special privileges, as, "Pupils shall not be permitted to leave the school grounds at intermission periods"; or with routine, as, "Library books will be issued and received only on Friday afternoons." If the meaning of any order is not clear, explanations should be asked for at once. It should not be necessary to give instructions twice, and a teacher should not complain about them; most of them are not important unless they are disobeyed, and the best plan is to accept them in a good spirit.

When instructions reach the teacher that have to be given to the pupils, there is a chance for a dull or tactless teacher to make a serious mistake. This she will do if she is so unthinking as to ridicule the instructions or call them unnecessary. As a result the pupils will become contemptuous of authority and inclined toward disobedience. The teacher herself will have been guilty of disloyalty. In extreme cases the offense is serious enough to merit dismissal.

The proper attitude for the teacher is this: She should read the instructions, if they are intended for the pupils, and tell them from whom they come — the principal, the superintendent, or the school board. She should state why the regulations have been issued, and, if the situation makes it advisable, should indicate the authority which the law gives to make rules and regulations. If the matter is very important and if it is likely that the children will object to the instructions, she should appeal to the pupils' loyalty and school spirit, asking them to give the new rules a fair trial. If there is some point which is especially obnoxious and which may cause real trouble, she should talk the matter over with her principal and ask his advice. She should in all cases teach the pupils to respect the law while it is the law, and should never be guilty of inciting and leading an insurrection against the school authorities.

Community organization. The teacher's second important relationship is with the community, especially with community organizations which have school improvement as their chief purpose. The parent-teacher association is a good example of this type of organization. It naturally varies in different communities, in its efficiency and its membership. In some districts it is very active; in others it is without force. In some districts every one who wants to join is admitted; in others, while membership is open, it is actually composed largely of patrons who have children in school. The common democratic organization is very necessary in a small community; the more specialized type of association is likely to prevail in cities.

The beginning teacher is sometimes called upon to help organize a parent-teacher association. The first step in this task is to talk the matter over with several of the leading men and women of the district. She may in these conferences suggest two or three problems which should be

considered at the meetings. If the responses are favorable, a subject may be selected for discussion and a meeting called for the purpose of discussing it.

To illustrate, in a certain small school, the teacher wanted to secure suitable play apparatus. After forming in her own mind a good idea of what was needed and what could be done, she talked the plan over with the pupils. She next called upon the more progressive and public-spirited people of the community and stated the idea to them. She suggested that a meeting be held at the schoolhouse to talk over ways and means. Since the responses were favorable a little program of entertainment was prepared by the pupils, and arrangements were made for two or three patrons to start the discussion of playground needs. Invitations to the parents and others were written and distributed by the pupils, and posters advertising the meetings were made and put up in several places. On the day before the meeting, the leaders telephoned to a special list of parents and urged them to attend.

The first meeting. A little before the hour set for the first meeting, classes were dismissed, the older pupils remaining at school to welcome the visitors and help with the program and refreshments. One of the leaders called the meeting to order and the program was rendered. An interesting feature was a good, lively program of group singing. The purpose of the gathering was then briefly explained, and free discussion was called for. The mind of the meeting being favorable to taking action on the problem, a committee to draft a plan and report later was appointed. No permanent organization was effected the first time, nor was the subject mentioned.

If such a basis as this has been laid, then, after the special purpose for which the meeting was originally called has been accomplished it may be wise to suggest a per-

manent organization. The first objective should be to show the value of coöperation and to accustom people to working together. The teacher and the officers should remain enthusiastic, the programs should be clever and interesting, the meetings should begin promptly and should not be too long. Care should be had to select undertakings which can be carried through successfully without the expenditure of too much energy and time. If these precautions are observed, a strong foundation will have been laid for further effort and closer organization.

The permanent organization. As soon as confidence has been developed through experience in coöperation, some one should move that the organization be made permanent. Those who have shown leadership ability in the preliminary meetings should be picked for temporary officers, such as president and secretary. After they have been elected, a program of four-minute speeches may be rendered on such subjects as:

1. Why we need a parent-teacher association
2. What parent-teacher associations have accomplished
3. The value of affiliating with the state parent-teacher association
4. Typical parent-teacher association programs

At this meeting any temporary committees which may be needed should be appointed by the president. At least four are suggested: (1) to prepare a constitution; (2) to increase the membership; (3) to prepare a program for the next meeting; and (4) to nominate permanent officers. If any business remains from previous meetings, it should be disposed of promptly and adjournment taken without too great delay. The motto for all meetings should be, "Begin on time; quit on time." Those present should be urged to attend the next meeting and to bring with them as many of their friends as possible.

At the meeting to perfect the permanent organization, the temporary chairman should preside and should call upon the secretary to read the minutes of the previous meeting. After the minutes are read and approved, the report of the committee on constitution is read and discussed and, if satisfactory, is adopted. The next step is to hear the report of the nominating committee and to elect officers. The newly elected officers should take charge of the meeting, and the program prepared for the occasion should then be carried out.

The constitution. The constitution should be short and simple. A model may be obtained from the state association, or from the National Secretary, 1201 Sixteenth Street, N.W., Washington, D.C. The National Association also publishes a *Handbook of Information about Parent-Teacher Associations* which is a guide to the organization and management of local societies. If no other model is available, the following form of constitution may be adapted, without many changes, to local needs:

Article I

The name of this organization shall be the Parent-Teacher Association of ..... School.

Article II

The purpose of this association shall be to bring into closer relations the home and the school in order that they may coöperate intelligently in the education of the children and the improvement of the community.

Article III

Any one interested in educational and social betterment may become a member by signing this constitution.

Article IV

The officers shall be a president, a vice-president, and a secretary-treasurer.

Article V

Regular meetings shall be held on the first Friday of each month from September to June, at 3.30 P.M., for not longer than one hour.

Special meetings may be called by the president whenever necessary. Notice of all special meetings must be given to members at least one week in advance.

Twenty-five per cent of the regular membership shall be sufficient to constitute a quorum and transact the business of the association.

Article VI

Standing committees of three members shall be appointed by the president for one year on membership, programs, ways and means, and social affairs.

Article VII

This constitution may be amended at any regular meeting by a vote of a majority present, provided the proposal to amend was made at a previous meeting.

Order of business. Next in importance to the constitution comes the order of business. By means of a definite order time is saved, a regular plan will be followed, and nothing of importance will be left out. The order of business should be adopted by majority vote soon after the adoption of the constitution. It may consist of the following activities, which should be taken up in the order given:

1. Calling the meeting to order.
2. Reading and approving of minutes of previous meeting.
3. Reports of committees.
4. Unfinished business.
5. New business.
6. Adjournment.

The special program is usually given before the business meeting. This plan permits the children to go home, and gives the speaker a chance to leave if he does not care to remain for the meeting. Children become restless if they

are detained, and an outside speaker seldom cares to listen to the business proceedings of an association with which he is unacquainted. The rules of the National Association are very explicit on these points, and they have been so well observed that parent-teacher associations may well serve as models to other organizations in prompt and efficient management of meetings.

Activities of associations. The range of activities of parent-teacher associations is very wide. The associations supply shoes and clothing for needy pupils, furnish and serve hot lunches, provide many kinds of equipment, help establish and support play and vacation schools, supplement school instruction in music, art, and nature study, help direct social activities, influence the school board to raise salaries, furnish better schoolhouses, and provide better equipment. The following list of typical achievements will show that parent-teacher associations have provided:

1. Equipment
   - a. Swings, teeters, sand courts, slides, bars, balls, bats, nets, and the like for the playground
   - b. Maps, charts, sand tables, library tables, clocks, and flags for the schoolroom
   - c. Pianos, phonographs, radios, orchestra instruments, and song books
   - d. Library books, magazines, dictionaries, and encyclopedias
   - e. Stereopticons, moving picture machines, slides and films, industrial exhibits, picture booths, and display charts
   - f. Pictures, statuary, curtains, and stage furnishings
   - g. Artificial lighting, improved window lighting, painting, fountains, lawns, flowers and shrubs, and walks
2. Instruction
   - a. Home projects and private instruction in subjects not taught in school
   - b. Improvement of scholarship

3. Welfare
   a. School nurse, physical examinations, dental treatment, nutrition classes, and hot lunches
   b. Sanitary drinking cups, better toilets, and clean buildings
4. Social
   a. Club work and leadership of industrial clubs
   b. Boy Scouts and Camp Fire Girls organizations
   c. Evening lectures, entertainments, picnics, and literaries
   d. Parties and dances
5. General
   a. Proper candidates for the school board
   b. Campaigns for buildings and new subjects
   c. Information about new educational and social problems

Organization principles. Out of the experience of many associations have grown sound working principles, the best of which are stated in the North Carolina *Handbook*:[1]

1. Every club should have a specific and worthy purpose and be working for something all the time.
2. Every club should affiliate with the state association and thereby become a part of the national association.
3. Large numbers should be interested in the work of the association, and responsibility should be widely distributed. The idea that a few are trying to run things should not exist.
4. The interest of the men of the community should be obtained.
5. The time element plays an important part in the meetings, and if men cannot attend in the afternoon have the meetings in the evenings.
6. The meetings should be well advertised and the association should be kept continually before the public.
7. The children should be kept interested. They should write letters about the programs and should be given places on the programs.
8. Outside forces should be asked to assist in the program when they are available, and when their contributions are consistent with the purpose of the meetings.
9. Funds should be obtained either by membership drives or by

[1] Harold D. Meyer: *The Parent-Teacher Association*, pp. 13–15.

community affairs, such as festivals, plays, and sales. Money should not be asked for at the regular meetings, and dues should be kept low.

10. Membership drives should be held as often as necessary, with the children competing for new members.
11. Local talent rather than outside speakers should appear upon most of the programs.
12. Too much time should not be given to social features; this means too much entertaining and too little work.
13. The society should work for the upbuilding of the community in every way.

The teacher's place in the community. The tendency seems more marked every year to judge the teacher largely on the basis of her community relations. This is due partly to the effort to correlate the school more closely with life, and partly to the belief that the teacher owes a service to all the community. Participation in the wider affairs of the community is good for the teacher. It gives her a chance to extend her influence beyond the school door and beyond teaching the conventional subjects of arithmetic and reading. We often hear of gatherings of old students in honor of a principal or a teacher who left the impress of his ideas and his character upon every one he met. This is better than being merely a good teacher of subjects. Much of the power of the teacher comes from having unusual personal qualities. Some of it is due to observing the minor elements of social relationships, some of which are treated in the following advice:

1. Live in your school community, take an interest in its people and its affairs, and believe in its future.
2. Do not criticize the people as ignorant, stupid, old-fashioned, or unprogressive. Do not find fault with the school nor complain that the children are ill-mannered and dull. Find something worth praising.
3. Do not try to bring in too many ideas that are new to the

people; it is better to follow local customs for a while. After you have become better acquainted with the neighborhood it will be easy to introduce new practices. Never do anything that shocks the popular taste. If dancing is under the ban in that particular community, do not dance. If you find the local prejudices and repressions too much to bear, the best thing for you to do is to get a new position for the next year.

4. Try to think of the position as one in which you expect to stay permanently. This will not keep you from getting an appointment to a better position, but it will keep you from much discontent.

Summary. The school cannot be a successful institution unless all the forces concerned work together. The teacher should loyally support the authorities and supplement their efforts in every possible way. She should also help in organized community endeavor, the most important of which is represented in the parent-teacher association. A desirable attitude toward coöperative relationships includes willingness to learn, willingness to accept responsibility, cheerfulness, and faith in the school. The essential requirement in a parent-teacher association is a well-defined program and punctuality in action. The teacher cannot afford to neglect her classroom duties for community activities, but affiliation with community groups is wise and advantageous.

EXERCISES AND PROBLEMS

1. Make up a list of school activities which are coöperative in character, such as giving an entertainment.
2. How would you deal with a teacher whose reports are usually late? With one who habitually comes late to meetings?
3. In a certain village school, the principal requested the teachers to come to the front entrance to have a group picture taken. One of the teachers refused, though she was presentably dressed and above the average in looks. Thereupon the principal, in no good humor, ordered her to take her place with the rest. What do you think of the situation? Of the principal's action? Of the teacher's action?

4. Give as many reasons as you can why a teacher should not criticize her predecessor in the school. Why she should not indulge in public criticism of the school.
5. What is meant by "going over the head of the principal" to the superintendent or the school board? Is it ever justifiable? Discuss.
6. Explain the difference between suggestions and instruction. How may the teacher take account of these differences?
7. Explain why it is a good idea to enlist the support of the community for school affairs.
8. Name as many ways as you can in which the community may help the school.
9. Make up a year's program that would be appropriate for a parent-teacher association in some community you know.
10. Suggest ways and means of raising money for a parent-teacher association. Why is it inadvisable to depend upon dues?

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PART III

PRINCIPLES AND METHODS OF TEACHING

CHAPTER XI

THE LAWS OF LEARNING

The learning process. Learning is the process by which experience is obtained. It goes on everywhere, in school and out. It is common to man and animals. White rats, guinea pigs, cats, dogs, and monkeys can learn. The difference between the learning of animals and that of man is one of quantity rather than kind. Animals can memorize, judge, and learn procedures, but they are greatly limited in their ability. With man, however, the ability to learn is a marked characteristic. There is enough known to show that learning, like everything else in nature, follows certain universal laws, and that these laws apply in a way which can be foreseen. In no case can learning be prevented altogether, but conditions can be set up that will greatly retard or greatly aid the process; and control over what is learned can easily be exercised.

The process of controlling and aiding learning is called teaching. There are literally thousands of things which can be taught to children. Those which are chosen for learning constitute the courses of study. In teaching, the children's time is distributed properly among the selected experiences; the pupils are given guidance as to what to do, and how to do it; distractions and interruptions are minimized; and rewards are given for the successful completion of tasks. Suppose we are watching some boys teach a dog to jump through a hoop: let us note the chief steps in the process:

1. They know clearly what they want to do.
2. One boy holds the hoop about two inches from the ground, the other holds out some bread and calls the dog.

3. The dog responds by running up toward the boy with the bread.
4. As he comes up, the first boy moves the hoop between the dog and the bread.
5. The dog walks through the hoop.
6. He is given the bread and is praised and petted.
7. The process is repeated many times, the hoop being raised slightly higher each time.
8. Now a second dog comes up and begins to play.
9. One of the boys takes the second dog and shuts him in the garage.
10. The teaching continues until a point is reached where the dog runs under the hoop, or around it instead of through it.
11. The boys get boxes and build up such a barrier that the easiest way for the dog to get the bread is by jumping through the hoop.
12. After a little practice at a height which the dog manages readily, the lesson is ended.

An analysis of this process would show that there are three distinctive elements apparent. There is first, the *situation:* the boys, the dog, the playground, the hoop, the bread. There is, second, the *response:* the dog's running, his jumping through the hoop and the resulting changes in his nervous mechanism. There is third, a *connection* made between the situation and the response. If the lesson is repeated again to-day or to-morrow, the connection may be made of jumping higher or faster, but finally, no matter how skillful the teacher, how willing the pupil, or how great the reward, the limit of the dog's jumping will be reached. That is, no teacher can teach his pupils more than they can learn. If the boys had wished, they could have drawn a curve showing how high the dog jumped at the first trial, how high at the second, and so on. This would be his learning curve.

The basis of learning. Psychology gives us an understanding of the basis of learning. The nervous system of

which it treats is composed of approximately three billion cells (some say fifteen billion), so small that they cannot be seen with the naked eye. Under the microscope, they appear as long, slender, threadlike structures. The cell body is composed of protoplasm. Each cell contains a nucleus which is essential to its life. Many minute projections called "filaments" lead off from the cell body. These are of two kinds: (1) axons and (2) dendrites. A cell has only one axon; it may have many dendrites. Axons vary in length; they may be very short or they may attain a length of five or six feet. A bundle of axons covered with a protecting and nourishing sheath constitutes a nerve. The dendrites are short and many-branched, each like a tiny shrub.

There is some similarity between the nervous system and a telephone system. The many cord-like neurones are represented by the complicated wires and cables of the telephone. The spinal cord, the mid-brain, and the cerebrum are the "centrals," and the sense organs are the receiving apparatus. The ears, eyes, nose, mouth, and skin contain nerve ends which are each sensitive to some one kind of stimuli, such as sound, light, odor, taste, touch, heat, cold, and pain. A *stimulus* is anything which, when brought into contact with the nerve ends, starts a nerve current to the spinal cord or the brain. At the nerve centers, connections are made with other cells, and here the current is started back, to the muscles, glands, or brain cortex, and terminates in a *response*. This forms the *situation-connection-response* circuit. While it is not probable that this simple mechanical operation explains all nervous activity, it is significant in explaining an important process that plays a part in all learning.

The connection. The neurones which originate in the sense organs are called *sensory neurones*. Those which terminate in the muscles and internal organs are called

motor neurones. Those which lie between the sensory and the motor cells are called *inter-connecting neurones.* The place where the axon of one neurone comes into close contact

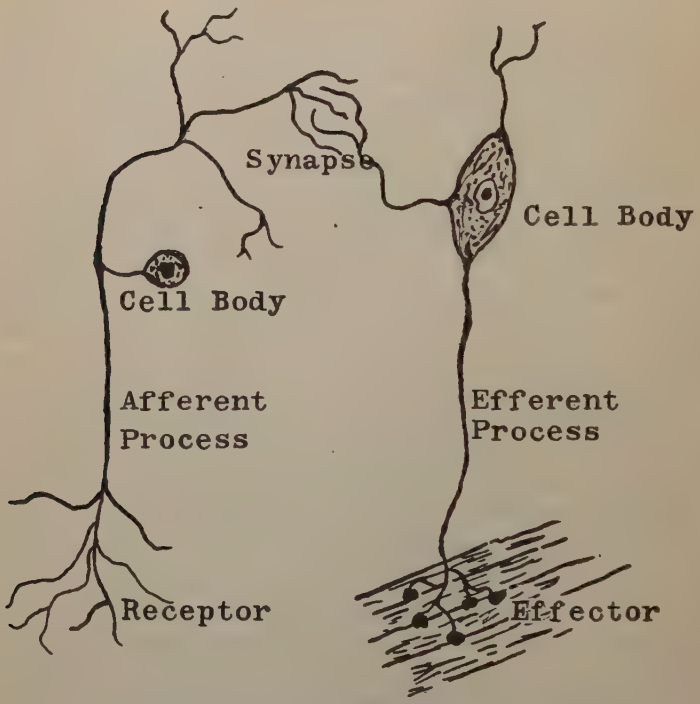

FIG. 5. A SIMPLE NERVE CIRCUIT, SHOWING CELL PARTS

with the dendrites of another is called a *synapse.* This is where the connections are made. At the synapse, the nerve current meets with little or much resistance, depending upon how well the connections have been made. Thus if the stimulus three plus four has been well connected with the

response seven, whenever this stimulus situation is presented to the proper sense organ, the nerve current travels in over the sensory nerve to the synapse, and directly on to the response seven. If it has not been well made, there may be no sum response at all, or it may be nine, eleven, or any other number. Many connections are already formed at birth and control the life processes, the reflexes, and the so-called instincts. Many more are formed through training and instruction (experience) and control the habits.

The importance of the connection between stimulus and response may be seen in many familiar mechanical devices. An automobile, radio, piano, typewriter, adding machine, door bell, or telephone will not work unless the stimulus and the response are properly connected. The stimulus, pulling the emergency brake on a car, will not result in the desired response, tightening the brakes, unless the brake lever and the bands are securely connected. This same principle applies to plant and animal life. The plant responds to the stimulus of light and water because of existing connections in its organism. The animal makes adequate responses to situations within its environment because of inborn or easily acquired connections in its nervous system. The innate connections in plants are called *tropisms*, in animals reflexes and instincts. Man has many reflexes and instincts, but he has in addition a superior ability for modifying existing connections and making new ones. This is called *capacity*. Because of capacity man is preëminently the learning animal.

Learning and connecting. In terms of the nervous system, learning may be regarded as the process of connecting situations and responses. The neurones are not only sensitive to stimuli and able to transmit nerve current, but they have such characteristics that connections once made

can be changed or greatly modified. The ease with which modifications can be made in the nervous system is called *plasticity*. The extent to which connections are retained is called *retentivity*. Learning, then, is based upon the plasticity and retentivity of the nervous system. Plasticity is assumed to decrease with age; hence the younger the child the more easily he learns. Retentivity seems to improve rapidly with age up to puberty, and then more slowly until maturity. Native ability means the facility and permanency with which connections can be formed within the nervous system. Generally speaking, the person who has a plastic mind has a retentive mind. Individual differences in plasticity and retentivity account for difference in mental capacity or ability to learn.

On account of the great plasticity of the nervous system, the child is able to make many responses to any situation. Any response that he is able to make can also be connected up with any stimulus that he can sense. This ability is sometimes called the *law of multiple response*. To illustrate, the number of responses that a pupil may make to the situation six times seven is unlimited. It is the work of the teacher to see that the situation is definitely and permanently connected with the response, "forty-two." The making of connections such as this constitutes learning.

Most of the learning which goes on in a schoolroom can be classified under one of three types, as follows:

1. Connections have been made once, but need to be renewed. Drill and review work come under this type.
2. The elements in the situation are known, but need to be learned in a new order. Learning that six times seven is forty-two after one knows that seven times six is forty-two is an illustration.
3. Connections have never been made, and the elements are unknown. Learning to write is an illustration.

The writing situation is, let us assume, wholly new to the child, and he therefore has no satisfactory response ready. If left to himself, his writing will be only a series of scratches. Under the direction of the teacher he is forced to make a number of responses until he finds the right one or the best one. There is much learning to follow this process, and it becomes the function of the teacher to give such guidance, at such times, as will prevent the pupil from falling into errors, or, as we say, forming bad habits. If bad habits once are formed the teacher has the more difficult task of making corrections.

The results of permanently connecting stimulus and physical response, as in writing and speaking, are called habits. Knowledge is acquired the same way, the difference in that case being that the connections are made between ideas. Memory is the retention of connections once they are made. As soon as a person understands that all learning means the making of specific connections between stimulus and response, he will cease to believe that because a child has learned one thing — say, six plus seven, he has necessarily learned another similar thing — say, seven minus six.

Learning illustrated. An illustration taken from common schoolroom procedure will serve to show further the relation between stimulus and response in the learning act. Suppose the object of the teacher is to teach a beginner how to read by sight the word "pen." Assuming that the child knows what a pen is (has seen one, has seen one used, has handled one), and knows the name of the object, the various steps in the procedure might be somewhat as follows:

Stimulus	Response	Connection
1. The teacher shows a pen and speaks its name.	The pupil speaks name and sees object.	Object — name.

Stimulus	Response	Connection
2. The teacher writes the word pen on the board, shows the object, and speaks its name.	Perception of the object, spoken word, act of writing, and written word.	Object — spoken word — act of writing — written word.
3. The teacher requests one of the children to go to the board and write the word pen.	The pupil writes the word.	Word spoken — act of writing — written word.
4. The teacher praises the pupil for his work.	Pleasure.	Word written — pleasure.
5. Repetition of step 2 as often as necessary and other steps in sequence.	Response 2 and others in order.	Connection 2 and so on.

The laws of learning. The success which a teacher would have with the process just described is, as has been said, dependent upon many factors, especially upon conditions in the nervous system of the learners. Obviously, it is a delicate piece of work to assist children in making and retaining the proper connections. It requires special acquaintance with the ways in which connections are made: how and what stimuli to present; what responses to evoke; what responses to inhibit; and what motives to bring in to help make the learning most effective. The knowledge and skills of this kind make up the technique of teaching.

A sound technique is based upon an understanding of the natural behavior of children. The principles which explain how children learn are often called the laws of learning. They have been derived by teachers and psychologists from observations, experiments, and by trial in the classroom, rather than from any specific investigation. They are not to be regarded as having the same reliability as natural laws — such, for example, as the law of gravity; instead they signify that, in the long run, learning will follow

the directions indicated. Inasmuch as these principles do have their exceptions it is better to think of them as tendencies (usually true), rather than as always true. Three of these tendencies, known as the three laws of learning, have been found to be of great significance to the teacher. They are:

1. The law of readiness
2. The law of exercise
3. The law of effect

1. The law of readiness. It has often been said that the great masters of human life are pleasure and pain. This means that we tend to do what gives us satisfaction, either in the doing or in the results, or in both, and to avoid doing what gives us annoyance. When a connection, whether inborn or not, is ready to act and is stimulated along the lines of this readiness, the organism is satisfied if the response takes place and annoyed if it does not. This is basically what is meant by the law of readiness. If the pupil is ready to learn, and learns a given assignment, it satisfies him to recite it and to be praised for his industry; it annoys him not to be called upon for the recitation. If he is not prepared, it annoys him to be questioned. Certainly it is important to know that all learning must begin with what the pupil already knows and can do. By the modification of connections which are in readiness to respond, new knowledge and skills are acquired and in their turn give a basis for building new responses.

The starting-point in teaching is for the teacher to know what connections are already formed, or, to put it in another way, to what stimuli the child is ready to respond. With all children, the best source to seek for information as to their readiness is those tendencies which are natural and habitual to them. Curiosity, play interests, and response to rivalry,

self-assertion, and social approval are good examples. Special interests and desires may be utilized either by employing them as stimuli to evoke new and different responses, or by connecting new stimuli with them as responses. For instance, if a boy has special interests in rabbits as pets, his arithmetic problems and his composition assignments may have to do with rabbits until his interest in the subject has been modified to include interest in arithmetic and composition. Previous achievements are all ready to act and provide the starting-point for new learning Multiplication cannot be taught until addition is sufficiently well known; learning division is dependent upon having readiness in subtraction and multiplication. The law of readiness implies the well-known principle of going from the known to the unknown.

Basically, the purpose in grouping pupils into classes is to put together those who are equal in readiness and who will remain fairly equal through a term or a semester. Pupils who know the same phase of arithmetic equally well are supposed to be equally ready for the next step in learning the subject. Likewise, the mental ability of the pupil must as a rule approximate the average mental age of the class if he is to be ready for the work of the grade. Many pupils will in time reach the limits of their ability to grow mentally, and will never be ready for more advanced work. The typical child having an intelligence quotient of from sixty to seventy will probably never be ready for work above the fourth grade; only those who have intelligence quotients of one hundred and ten or more are likely ever to be ready for college.

Applying the law of readiness. The first thing to remember in applying the law of readiness is that instruction must be definite, because learning consists in forming specific connections. A pupil can never be ready for vague and

indefinite assignments. No child learns in general; he learns something in particular. Second, there should be no gap between the new and what he already knows, nor should the new material be so complex that he does not recognize its connection with the old.

An immediate interest is a sign of readiness, be it in baseball, pets, aeroplanes, stamps, or geography. Interest is nothing more than the outward expression of inward readiness. The significance of this fact is that the new learning may be tied up with a present interest: arithmetic with stamp collecting, language with games and sports, or geography with products. Remote reasons for learning are not very appealing to any one; they are almost always unattractive to children, who are concerned mostly with the present. Much of the new materials in instruction should be developed out of the live experiences of the day, and their use continued only so long as the interest in them lasts. For example, in a near-by school, for two months last autumn, the pupils of the sixth grade were all greatly interested in puppet shows, but by Christmas new interests had arisen and the old had been submerged. It was obviously undesirable to attempt a puppet show at Christmas time. Unless the old interest can be revived in some manner, it is better to turn to something else.

This law of readiness also stresses the importance of the children being kept in good physical condition. If they are not in good health, the nervous system may not respond readily to the stimulus offered by the teacher. A fatigued nervous mechanism is not in condition for activity. Competing situations in the environment (noise, interruptions, disorder) are also a great hindrance. Worry, sleepiness, and overexcitement are other examples of physical distractions which prevent readiness.

Intense and vivid stimuli tend to excite response. There

is greater readiness for objects and pictures than for the names of things. This fact justifies giving attention to visual instruction by using pictures, specimens, objects, illustrations, maps, charts, lantern slides, and moving pictures. It is evidence that a demonstration (showing how) is a better method of teaching than is telling how.

2. The law of exercise. The law of exercise is that the strength of a connection is increased by using it. The more often forty-two is connected with six times seven the more likely the two are to be associated in the future. On the other hand, the strength of a connection is decreased by lack of exercise. When a connection has not been used for some time, the situation may fail to call up the desired response when it is needed. This is what happens when a person forgets. The more recently a connection has been made between two things, the more likely it is that the one will call up the other. This principle is sometimes called the law of recency, but it is easy to see that it is based upon the law of exercise.

The activity which constitutes exercise is always the activity of the learner. In other words, when the pupil is ready to learn, the learning can come only through his own responses. No pupil learns through the activity of the teacher or of any one else but himself; he cannot learn without activity. The mere presentation of materials does not insure learning. The pupil must concern himself with the materials and must react to them in a suitable way.

Greater frequency of exercise is required for certain connections than for others; and there are also wide differences among pupils. Assuming that all the pupils in a group are equally ready for a given lesson, the more difficult the materials are, and the duller the pupils, the greater will be the number of repetitions that will be required. It is also considered important to teach, as early as possible, those things

which should become our permanent possessions. They include habits of speaking, writing, spelling, and simple computation, and health practices. When these connections have once been well established through usage, they are hard to change. The difficulty that teachers meet with in overcoming bad language habits is explained on this basis.

Applying the law of exercise. A large amount of the work of teaching consists in helping pupils in their practice of making connections, and thus every day the teacher appeals to the law of exercise. The first care should be to avoid forming and exercising wrong connections; as a rule, they are just as easy to form and employ as correct ones. If wrong connections are made, the child will make the wrong response; furthermore, the presence of a wrong connection makes it harder to teach the correct one. It is easier to teach a person how to spell *separate* if he has never seen the word than it is to teach him how to spell it after he has practiced a wrong spelling. Similarly, it is easier to teach music to a novice than it is to teach it to one who has been incorrectly taught. Unless the learning situation is carefully prepared and the responses are carefully checked, errors will creep in and become fixed. In writing from copy, the pupil should imitate the original each time, not his own work. Errors should be detected and eradicated as quickly as they appear.

Much practice or exercise is required in learning the tool subjects, such as arithmetic, spelling, writing, reading, and language. There are two methods of carrying on this repetition: drill and review. Very often these two terms are used with identical meanings, but they are not exact synonyms. Drill signifies the repetition of the identical situation, response, and connection; review means a slight variation in the situation, but an identical response. This latter

doubtless results in the connection varying somewhat from the original, so that review is in reality a modified form of exercise. The differences between the two processes may be seen in the following illustrations:

	Situation	Response	Connection
1.	Drill: Multiplication table of sevens.	Product of seven times one, seven times two, etc.	Between multipliers and multiplicands, and their products.
2.	Review: Problem involving use of six times seven.	Product of six times seven, or forty-two.	Six times seven — forty-two.

It is possible, however, to repeat a thing many times without learning it. To have pupils write ten times each word they miss in spelling does not insure their learning the words.

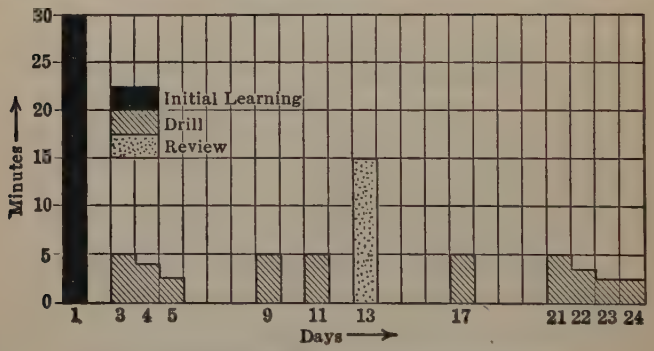

Fig. 6. Spacing and Time Allotment for Drill

The practice must be carried out with attention and *with the intention to learn.* Another help in practice is stopping frequently to recall what is being learned. This tends to give more practice on the more difficult forms, a principle which can often be turned to account in spelling, history, civics, hygiene, arithmetic, and reading. As soon as the

fundamentals of arithmetic are mastered, its ordinary use in problems should furnish sufficient practice. Practice periods should be short, say not over twelve minutes at the most. Ten minutes are adequate for penmanship drill, ten to fifteen minutes for beginning reading, fifteen minutes for spelling, and from twenty to thirty minutes for music. Three periods a week, of ten minutes each, give enough drill in physical training. In all cases, learning should be practiced at the topmost speed. Quick learners should be given more to do instead of having to repeat oftener. Slow and sure does not cover the facts; the pupil who learns most quickly retains the longest.

Direct learning is the most economical kind of learning. It is not a good plan to give time to preliminary drills in penmanship, physical training, language, and music. It is best to begin at once to do what is going to be done later. No habits should be formed which will have to be broken up later. Finger counting, making dots, tapping, and all such practices should be ruled out. If language and number games are used, they should furnish situations which are connected with real life situations, or at all events should result in responses which will be called out by, and will be useful in, real life. The trouble is that responses to artificial situations are not likely to be associated with real situations, and consequently all the time given to teaching them is lost. Learning, to be justifiable, must satisfy immediate or future needs.

3. The law of effect. Learning is also influenced by satisfiers and by annoyers. If a response results in pleasure, satisfaction, comfort, or some other agreeable feeling, there is a tendency to repeat it; if it results in displeasure, annoyance, discomfort, pain, or other disagreeable feeling, the tendency is not to repeat it. The law of effect is that the response which will be made to a situation depends upon

whether the results of that response have been found to be satisfying or annoying; it is one of the most important of all principles of conduct. Natural pains and pleasures resulting from action, rewards, and punishments that come from others, the anticipation of approval or disapproval by society, of the favor or disfavor of an ideal group of persons — these things determine what behavior will be.

The influence of annoyance and satisfaction on learning can be easily demonstrated. An experimenter studied the effect of failure-and-success suggestions on the rate of learning nonsense syllables, the subjects being adults. Each subject first practiced his syllables and was tested. He was then told that he was a failure, had done poorly, was inferior to others in the group, and so on. A new learning exercise was given him; he practiced as before, and was tested. The next day, after the preliminary drill, he was praised for his good showing, and again went through the drill and test exercises. At the end of a few weeks his record on days when failure suggestions were made was compared with his record on days when success suggestions were made. With the exception of one, whose record did not vary from day to day, all the subjects did appreciably better when working under the stimulus of praise.

The law of effect applies to all learning. Responses that are neutral or immaterial in their results count for nothing; they terminate merely in an indifferent attitude. The animal trainer has a fish for the trained seal and a lump of sugar for the trick horse, and through these material rewards makes the desired responses satisfying to the animals. Unpleasant consequences help to inhibit undesirable behavior. The teacher also should make the desired responses pleasurable and the undesired annoying. She may make judicious use of praise and blame, approval and disapproval, rewards, merits, honors, prizes. The use of positive incen-

tives (pleasurable) is more to be recommended than the use of inhibiting and annoying effects.

Applying the law of effect. The law of effect cannot be kept from operating. Unless the teacher's procedures are in conformity with it, she works against the laws of nature and hinders rather than assists the pupils. Dislike of school is a result of making school work annoying rather than satisfying. School work should never be connected in the children's minds with unpleasant consequences. It should never be used as a punishment. For example, it is not good psychology to make a pupil work arithmetic problems, study spelling, or stay in at recess as a punishment for bad conduct. Punishment is never satisfying; it tends to make school seem unpleasant to the pupil, while the teacher's object should be to make it pleasant. Having a cross and unpleasant teacher will make the pupil connect unpleasant ideas and experiences with the idea of school. Annoyance should be connected only with responses which the pupil should discontinue, such as idleness, mischief, inattention, disorder.

Good incentives should be provided. Competition, honor rolls, rewards, and learning curves are effective means of stimulating learning. Praise and blame, approval and disapproval, and noticing and disregarding may all be used to influence the nature of conduct. Pupils should be kept advised of their progress. A good record is satisfying, a poor record is annoying. Much incidental drill should be connected with activities which pupils enjoy. Arithmetic may be practiced by playing store; spelling, writing, and composition by playing post-office; and history by dramatization. Within certain limits, it is advisable to point out errors made by pupils, but whenever an error is pointed out the correct form should be at once substituted and used.

The learning curve. The learning curve is merely a

graph showing progress. When a pupil keeps a record of the quality of his writing or of the score he gets on tests in addition, subtraction, reading, spelling, or anything else, and makes a graph of what he has learned over a period of time, he is plotting his learning curve for that particular thing. If the curve is flat, it shows that no progress is being made. If it falls off, it shows that forgetting is going on faster than learning, and suggests the need of reviews and drill. It is wise to have each pupil keep a graph of his learning curve in each of the drill subjects. The graphs give him knowledge of his progress, serve him as an incentive to greater effort, and aid the teacher in giving instruction. Likewise, curves may be plotted of materials which the pupil is no longer learning; they will show the rate at which forgetting is going on, and will suggest what should be done.

Learning curves differ with individuals and with the materials being learned, but all have some characteristics in common. There is usually rapid improvement at first, as is shown in Figure 7. This may be due to having easy materials, or to the pupils taking unusual interest and making special effort, or it may be due to extraordinarily good teaching. Another conspicuous feature of most curves is the flat level stretch called a *plateau*; there may even be periods when the line drops toward the base. The causes of plateaus and declines are many, and in each case only careful study will serve to explain them. The most probable causes are lack of interest, illness, loss of sleep, worry, lack of exercise, the wrong kind of food, emotional strain, fatigue, eye trouble, distractions, and deficiencies in earlier learning.

The teacher's first rule should be to anticipate these plateaus and declines and by varying methods — changing incentives, giving encouragement, and analyzing difficulties — prevent their occurrence. If they do occur, the causes should be determined and removed. The curve of forget-

ting dips very rapidly at first, but at the end of about five days it falls less rapidly, and soon becomes level. A test now and then of material that has been allowed to fall into disuse is valuable. It shows, for one thing, how well the material was learned originally. The final conclusion is that each pupil should be given facts at intervals of one to three days that will enable him to check up on his rate of learning and retention.

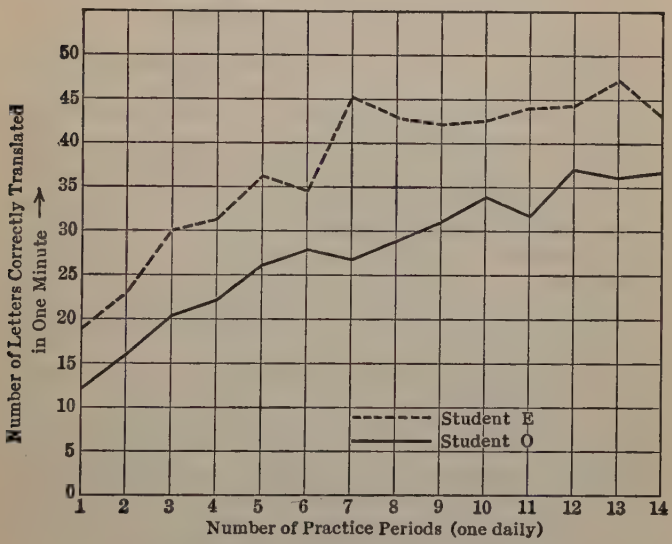

FIG. 7. A LEARNING CURVE

Translating letters into code symbols of the Morse alphabet

Summary. Learning follows the immutable laws of nature, and if teaching is to be effective it must conform to these laws. An understanding of the nervous mechanism is basic to the best teaching. It helps to a realization of the importance of connections between stimuli and responses. The process of making the connections is learning; the direc-

tion and guidance of the process is teaching. There are three leading tendencies of human nature which the teacher should make use of: (1) the law of readiness, (2) the law of exercise, and (3) the law of effect. Good technique in teaching is dependent upon applying these laws to the work of the school. A charted record of progress in learning constitutes the learning curve, a device which can be used to reveal the needs of the pupil.

EXERCISES AND PROBLEMS

1. Explain why good teaching must conform with the way the pupil naturally learns.
2. Explain the statement that pupils may learn in spite of the school rather than because of it.
3. Give an illustration showing what use you could make, in your teaching, of the law of readiness.
4. What emphasis should be given, according to the law of exercise, to systematic reviews in school work?
5. Give illustrations to show how the law of effect has been violated in teaching.
6. Illustrate the use you would make of each of these three laws in teaching pupils to leave the room in an orderly manner. In teaching a list of words in spelling.
7. Why is it important that teachers know the chief characteristics of learning curves?
8. Devise a scheme whereby you use numbers in place of letters for words. For example, let 1 stand for a, 2 for b, 3 for c, and so on. Take some magazine article and substitute the numbers for the letters. Do this five minutes a day for two or three weeks. Keep a record of the number of letters you were able to transcribe in the five minutes each day. Use the results in plotting a learning curve. Try to explain the characteristics of the curve.
9. To obtain another type of learning curve, count forward from one to fifty twenty times, as fast as you can, and time each count. Next count backward from fifty to one twenty times, keeping a record, as before, of the time required for each count. Plot both of the resulting curves and discuss the form of each.

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CHAPTER XII

SCHOOL GRADING AND TEACHERS' MARKS

Group instruction. Grading is the process of assigning pupils to the class in which they can work to the best advantage. The necessity for grading grows out of the fact that for the most part children are taught in groups. If there were no such thing as group education, the great masses of people would have no educational opportunities. It is a means by which the cost of instruction has been kept within the ability of society to pay. About three fourths of all the money spent for education goes for teachers' salaries, and the relative costs of education per pupil in different schools are just about in proportion to the number of pupils in the average class. In city schools, the size of the average class is from thirty-five to forty pupils; in rural schools the enrollment will run from twenty to thirty. Since group instruction is the universal rule, the teacher should know its advantages so that she may make the most of them; she also should know its disadvantages so that she may reduce them as much as possible. The advantages and disadvantages may be stated as follows:

I. Advantages of Group Instruction

1. It is economical.
2. The pupil learns his weak and his strong points by comparing himself with others.
3. The pupil learns the necessity of working coöperatively with others.

II. Disadvantages of Group Instruction

1. It is often mechanical.
2. It does not fit the mental capacities of the superior and the inferior pupils of the group.
3. It is best fitted to the average, or mediocre, pupil.

I. Advantages of Group Instruction	II. Disadvantages of Group Instruction
4. The pupil is stimulated through competition with others.	4. It causes the inferior pupil, since he is not promoted with his class, to form the habit of failing.
5. The pupil learns to respect the rights of others.	5. It results in the superior pupil becoming mediocre through having to meet mediocre standards.
6. It provides an opportunity for the pupil to practice being a strong leader or a good follower, according to his inclinations and abilities.	6. It causes considerable strain on the weaker pupils through their having to work beyond their capacity.
7. It furnishes an environment for forming social habits similar to the environment in which the habits will later be practiced.	7. It discourages the pupil who for some unavoidable reason falls behind the group.

Variations among children. A survey of the disadvantages of group instruction shows that they arise because of differences in the children. There are no two pupils exactly alike in all respects. Those who are alike in one characteristic may be vastly different in all others. Since there are no two pupils alike, there are no two who require exactly the same instruction. Yet we have seen that purely individual instruction is not practicable on the large scale on which education is organized in this country. Most of the teaching must be in terms of the group. The only way out of the dilemma is for the teacher to be aware of the most significant individual differences, in order that she may to some extent vary her instruction so as to fit it to individual needs, interests, and capacities. Among the most obvious of these differences we find:

1. *Age.* The ages of pupils actually attending the elementary

schools range from four to twenty-one years. This whole range is occasionally found in one school. The ages of pupils in the same grade frequently vary as much as six years. It is not age differences alone, but what these differences signify that is important. They mean differences in experiences, maturity, social traits, interests, and habits, and result in widely variant grouping. At the same time, being of the same age is no guarantee of likeness because mental differences are somewhat independent of age.

2. *Mental ability.* Intelligence tests show marked differences in the mentality of children in general in the same school, and in the same grade. Some first-graders may be only three years old mentally; some may be nine or ten years old. An eighth grade may have very inferior and very superior children among its numbers.
3. *Progress.* The rate at which pupils progress through school differs widely with individuals. There will be pupils in most classrooms who have failed of promotion two or three times; there will be a smaller number who have gained double promotions.
4. *Achievement.* Tests reveal wide differences in achievement among pupils of the same age and grade. In a sixth grade, for example, there will be found some twelve-year-olds whose achievement in arithmetic equals the average eighth-grader; others whose achievement is on the fourth-grade level.
5. *Health.* Examples of differences in physical efficiency and health are to be found in every school.
6. *Home environment.* Our schools are open to pupils of all classes of society, and homes good, fair, and poor are represented. Home differences mean differences in training, ideals, attitudes, habits, and opportunities to do school work.
7. *Educational opportunities.* Pupils differ in the kinds of schooling they have had. Some have been to good schools, some to poor. This makes them unequal in their preparation for further training.
8. *Attendance.* Differences in attendance may amount to one hundred or more days a year. Almost every school has a few pupils who do not attend regularly; others have some who rarely miss a day. The first are under a disadvantage which must be taken into account in giving instruction.

Grading of pupils. On account of the many and large variations among school children, grading for the purpose of group instruction is a most serious matter. The two great principles to follow are: (1) the importance of grouping together those who are equal in achievement, and (2) the importance of grouping together those who are able to progress at the same rate. Those who fall under the first heading are not so difficult to discover. By giving some good tests in the subjects, and looking over the past school record, we can tell which pupils are equal in spelling, arithmetic, reading, and the other subjects. Suppose, however, that those who are equal to-day are started off in the same class together; before long some will fall behind because they cannot learn, some because they are idle and inattentive, some because they are poor in attendance, and some because they are not given a fair chance at home. Under the old plan of annual promotions, if a pupil fell behind he lost an entire year, and must try all over again with the new class coming on. The plans now are to try: (1) to adjust the difficulty and the amount of work to the abilities of the pupils, and (2) to provide means whereby losses due to absence, unsatisfactory home conditions, and previous unsatisfactory training may be compensated for and made up without the loss of a whole year. The devices which have been developed for this purpose are:

1. *Frequent promotions.* Promotions and adjustments may be made every six weeks, every quarter, or semi-annually. The grades are broken up into shorter periods, so the pupil does not have to repeat or skip a whole year.
2. *Speed grouping.* Under this plan, one group may finish a year's work in six months, another in nine months, and the slow group may take twelve months. At frequent intervals, the faster-moving groups pass the slower ones, and a pupil may be transferred from one group to the other without losing any of the necessary work.

3. *Courses of varying amounts and difficulty.* The groups go at the same speed, but cover content in different amounts and of different degrees of difficulty. Pupils are assigned to the groups according to the amount and the difficulty of the work they are able to do.
4. *Maximum and minimum assignments.* This scheme can be used by any teacher in groups too small to divide. Three assignments are made: one contains the minimum which all must do; one, an average which pupils working under normal conditions should do in addition to the minimum, and one a maximum which the more capable pupils should do in addition to the minimum and the average.
5. *Promotion by subject.* Rural schools and departmentalized schools can promote easily by subject. A pupil may fail in fifth-grade spelling and arithmetic and pass in all other subjects. His failure in the two subjects would not cause him to fail of promotion in the subjects in which he passed, as it would under the annual-promotion plan.
6. *Fractional credit.* A standard mark, i.e., C, represents one credit. A step above C would gain a tenth of a credit more; two steps would gain two tenths more; while one step below C, i.e., D, would mean one tenth less than one credit, a grade two steps below would mean two tenths less than one. A bright pupil can complete the work in less than average time; a slow pupil will take more than average time.
7. *Special promotions and demotions.* Pupils are arbitrarily promoted and demoted at any time when it seems they would benefit by the change. The plan is not recommended, because evidence that they will benefit is usually not conclusive.
8. *Individual instruction.* Under this scheme, certain standards or goals are set up for each grade, and pupils are allowed to progress from goal to goal as fast as they can. The teacher's task consists in laying out work, judging whether the goals have been reached or not, and helping individuals. This plan is growing, but in the majority of schools it cannot yet be substituted for group teaching.

In the city school system, the teacher must be governed by the promotional plan adopted for all. In rural schools,

though more latitude is permitted the teacher, rural school pupils are not so well classified as are city children. Much time is wasted in pupils' attempting to do tasks that are too difficult for them or idling over tasks that are too easy. Both kinds of school can use maximum and minimum assignments and individual-instruction methods; to some extent, more frequent promotions and trial promotions may be used. Any successful procedure must be based upon accurate knowledge of the achievement and ability of the pupils, which indicates the need of knowing how to give and interpret achievement and intelligence tests.

Teachers' marks. The grading of pupils is now largely influenced by the marks which teachers give the pupils. There would be no objection to this method if the marks actually stood for degree of achievement in the subjects which they purport to measure. One of the reasons why they do not is because they are based upon personal opinion. Since no one could expect to tell exactly how hot a day is without reading a thermometer, or how much an article weighs without putting it on the scales, so no one could expect to tell how much arithmetic or reading a pupil has learned without measuring the achievement in these subjects by means of reliable instruments. The fact is, it is easier to estimate the temperature of the air or the weight of an article than it is to estimate the quality of school work.

The unreliability of teachers' marks has been proved in many ways. The same examination paper when graded by different teachers is given grades running from twenty per cent to ninety per cent. The same teacher has graded the same paper several times at short intervals and assigned a different grade each time. Teachers' opinions as to the intelligence and achievement of children differ from the results obtained on tests that are of sufficient reliability to warrant the belief that the test results are right and the teachers'

guesses are wrong. In spite of the fact that their marks are unreliable, some teachers still try to make fine distinctions in grading. They will mark one pupil seventy-five and one half per cent and another seventy-seven per cent, yet the chances are just about fifty-fifty that the true mark of either is ten points above or below the average of the marks given. It should be remembered that the actual mark which measures a pupil's real ability cannot be determined by any method now known, least of all by any teacher's unaided judgment. There are ways in which marks may be made more dependable, and these methods should be followed by every teacher.

The five-point method. The best method of distributing marks relies upon a scale of five divisions, which may be called from highest to lowest, A, B, C, D, and E. We might expect that a small percentage of a class would be superior to the rest, and would receive A's. A few others would be inferior, and would receive E's. Most of the pupils would be average and would be given C's. Still others would be above average, but not superior, and would receive B's; others would be below average, but not inferior, and would receive D's. While it is difficult to measure the precise ability of a pupil, it is not so hard to select pupils who are around average and then select others who are above and below average.

The trouble is that the average pupils will not all be alike, and cannot be sharply marked off from those above and below. If the pupils fell into five fairly distinct groups, with a few away at the top, then a gap, then another group above average but not superior, then a gap, then the average, and so on, marking would be easy. They do not do this, however. The difference between the best and the next best is perhaps very small, but it may be as great as the difference between the lowest in the superior, or A,

group and the highest in the above-average, or B, group. As a sort of guide, it has become the practice to assign a certain percentage of A's, and E's, a larger percentage of B's and D's, and a still larger percentage of C's. The assumption underlying this division is that ability is distributed normally, in the same way that height and weight and other natural characteristics are distributed. An acceptable division on the five-point system is:

A's about	6 per cent	(superior)
B's	25	(above average)
C's	38	(average)
D's	25	(below average)
E's	6	(inferior)

As has been said, such a division is not to be followed strictly every time a class is marked. In practice, it is often necessary to deviate from any adopted scale. This is especially true with small classes. If, however, there are deviations from this standard, the teacher should be able to explain them satisfactorily. The standard tends to make teachers more careful. The general tendency of teachers is to mark too high; the exception constantly marks too low. The distribution scale serves as a check upon both the low and the high marker.

The method illustrated. By way of illustrating the marking process just suggested, let us suppose that the teacher wishes to mark her pupils in arithmetical ability. The first thing for her to do is to decide what is meant by arithmetical ability, a question that can be answered best by using a good test in the subject. Then the pupils should be ranked in the order of their ability, with the pupil who is considered best placed first, the next best placed second, the next best placed third, and so on until every pupil has been ranked. The percentage of pupils who might be expected to secure A's (about 6 per cent) are next marked off from the top,

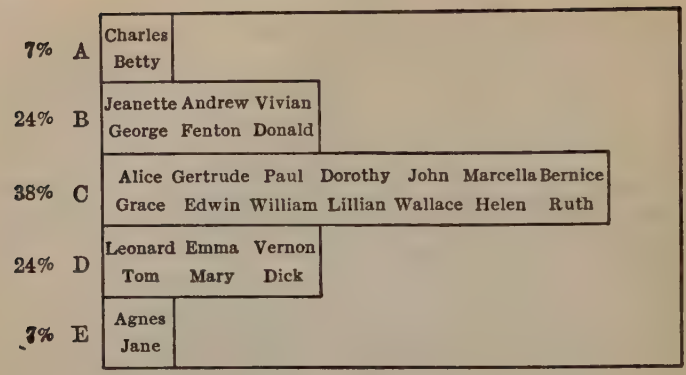

FIG. 8. A FAIR WAY TO DISTRIBUTE MARKS

then the B's, then the C's, and on through the entire list. After this general distribution has been made, special attention should be given to those near the borderline. These pupils should be compared again with others, and such readjustments should be made as seem most fair. If the children are carefully ranked and the doubtful cases accorded special attention, much more reliable marks can be given than if unaided opinion is used.

The following example will serve to show how the marking is done.

Tests and examinations. Grades will be much more reliable if they are based upon the results of a good test or examination. Even when a sound method of ranking and distributing marks is used, there is no real guarantee that the pupils have been ranked in the right order, unless the teacher has objective evidence of how they compare with others. A test that will give this evidence should conform to two main requirements: (1) it should measure what it claims to measure — arithmetic, for example, and not reading or history; and (2) it should measure accurately what it claims to measure. A pupil should not receive a low mark

Rank Order of Pupils in Arithmetical Ability		Grades	Comments
Charles	1	A	
Betty	2	A	Total A's = 2
Jeanette	3	B	Total B's = 6
George	4	B	
Andrew	5	B	
Fenton	6	B	
Vivian	7	B	
Donald	8	B	* Ordinarily Alice would be given the grade of B, but her work is more like Grace's in quality than like Donald's. Therefore, she is graded C.
Alice	9	C*	
Grace	10	C	
Gertrude	11	C	
Edwin	12	C	
Paul	13	C	
William	14	C	
Dorothy	15	C	
Lillian	16	C	
John	17	C	Total C's = 14
Wallace	18	C	
Marcella	19	C	
Helen	20	C	
Bernice	21	C	
Ruth	22	C*	* Ruth's work is about the same as Bernice's. She is quite a little better than Leonard. So she is marked C.
Leonard	23	D	
Tom	24	D	
Emma	25	D	
Mary	26	D	
Vern	27	D	
Dick	28	D	Total D's = 7
Agnes	29	D*	* Agnes does about the same grade of work as Dick. She is better than Jane, and really belongs in the D group.
Jane	30	E	Total E's = 1

in arithmetic because his conduct is poor; the teacher who gives this mark is not marking the pupil in arithmetic but in conduct. She should have a measuring instrument so accurate that repeated examinations of the same pupil will give very nearly the same results. A yardstick that makes a boy five feet tall one day, four feet the next, and six feet the third either is not a dependable measuring stick or else has not been accurately used. Likewise, an arithmetical test that gives a boy a grade of fifty one day, of twenty the next, and of eighty the next is not a dependable device.

There are two types of tests and examinations in use; they may be called standard and informal. Standard tests have been prepared by experts. They measure accurately what they purport to measure. The average scores of a large number of pupils of each grade, and in some cases of each age, are available. These are known as norms. The teacher may compare the scores made by her pupils with these norms, and find out what their status is compared with the standards. Familiarity with a few of the best standardized tests should be a part of every teacher's equipment. Advice as to what tests to use can usually be obtained by writing to the nearest normal school or teachers' college. Names and addresses of publishers of tests are as follows:

The Public School Publishing Company, Bloomington, Illinois
The World Book Company, Yonkers, New York
Teachers College, Columbia University, New York City, New York
University of Chicago Press, Chicago, Illinois
University of Cincinnati, Cincinnati, Ohio
University of Indiana, Bloomington, Indiana

Informal examinations. Standard tests do not satisfy all the needs for measuring instruments in school subjects. Sometimes, the costs of the forms are more than a school can afford. Tests may be needed at short intervals, or they may be wanted to measure matter of a local nature. At all

events, in order to have inexpensive tests that will cover any portion of the work one desires to measure, there must be teacher-made examinations. Tests prepared from time to time by the teacher, principal, or other local authority are called informal examinations. They are of two kinds; the essay type, and the objective type.

The essay examination has been in use for a long time, and all teachers are acquainted with it. It consists of several questions and exercises, usually from five to twelve, upon which the pupils write at length. The questions begin with "What," "When," "Where"; the exercises with "Explain," "State," "Give," "Summarize." This type of test is easy to prepare and easy to give. It may provide rather good practice in written composition. It allows the individual to interpret and discuss the problem in his own way. The trouble is it can touch only a small amount of subject-matter. It is doubtful if one of these tests can measure more than a tenth as much in the same time as can be measured with the objective type of test. It is very hard to score, and consequently the results are unreliable.

A few rules should be observed in giving essay tests. First, the examination should be so carefully prepared that the questions are clear and definite. If ten questions are to be answered, it is well to prepare fifteen or more and permit the pupils to select ten of them. A pupil should be permitted to answer the questions in any order he pleases. Second, the papers should be systematically graded. They should be read quickly once and then sorted into five piles corresponding to the points A, B, C, D, and E. After that they should be read again, and then ranked after the method described on page 219. Typical and special errors should be checked for correction in later recitations.

Objective tests. The objective test may be filled in or checked with a minimum of work by the pupils. It elimi-

nates personal opinion in scoring. The score will be the same no matter who grades the paper; personal likes and dislikes of the teacher will not affect the grade. The tests may be given orally, from the board, or from mimeographed sheets. Take, for illustration, the common true-false test, the directions for which are "Put a plus sign before all the statements that are more true than false; put a minus sign before all the statements that are more false than true." The teacher may prepare fifty to seventy-five statements and read them slowly and distinctly, the pupils writing on their papers only the number of each statement and plus or minus according as the statements are true or false. Instead of reading the exercises, the teacher may write them on the board, the pupils, as in the other case, setting down the signs and numbers only. In the mimeographed tests, a place is left before each statement, in a straight line down the page, for the answers.

It is a wise idea for the teacher to take a test herself before giving it to the pupils. By this means she will detect any incorrectly or obscurely phrased exercise. Fifty items is the minimum for a reliable test. A fair maximum time-limit for elementary-school pupils is thirty minutes, which is a sufficient period for from sixty to one hundred items. Until the pupils and the teacher gain experience, it is advisable to give one or two preliminary or practice tests. Many new books are appearing which tell teachers how to prepare, score, and use the results of objective tests; one of these books is mentioned in the list of references at the close of this chapter.

Types of objective tests. There are two common types of objective tests: the recall type and the recognition type. The recall type is made up of sentences and paragraphs with some of the most important parts omitted. At these points of omission blanks are left, and the task of the pupil is to

fill in these blanks so that the statement becomes complete and correct. Elementary-school pupils can recall on the average four items a minute; high-school pupils, six items a minute. Of the two samples of recall tests given herewith, the kind with the simple one-word answer is the better; the completion test is usually very unpopular among the pupils; it is also hard to score and hard to prepare.

1. *The simple one-word answer.* This consists of a series of sentences with one essential word omitted in each. The pupil is required to write in the word which completes the sentence. Scoring will be easier if the place for the final word is left blank, and the answer words written in a straight line. The teacher scores the papers by first writing the correct answers in order on a narrow strip of paper, and then comparing them with the answers given by the pupils, checking those that are wrong. The score is the number of correct answers. Questions with one-word answers may be used instead of statements.

   Example:

   The capital of Nebraska is .....
   The first president of the United States was .....
   The Lady of the Lake was written by .....
   What country is north of the United States? .....

2. *The completion test.* This differs from the one-word test in that several words may be left out of a sentence, or a whole paragraph may be given with many essentials omitted.

   Example:

   The ..... Ocean was discovered by ..... in 1513. Columbus was born about ..... in the city of ..... He undertook to reach ..... by sailing ..... He appealed to the kings of ....., ..., ..., and ..... for assistance. All ..... to help. ....., Queen of ..... agreed finally to supply him with ..... to fit out an expedition.

In recognition tests the answers to the questions are supplied, and the pupils' part is to recognize and check the correct ones on the list. Elementary-school pupils can recognize and mark about five items a minute; high-school pupils

about eight items a minute. The true-false type is used oftener than any other. Like the one-word-answer test it can be given orally, from the board, or by written forms. The three examples given include (1) the multiple-choice, (2) the matching, and (3) the true-false types.

1. *The multiple-choice test.* A series of sentences are given, with several ways suggested for completing each of them. The number of possible answers ranges from two to five, five being best. Each response is numbered, and the pupils are directed to put the number of the correct answer in front of the sentence and on a straight line with it, or they may be told to underline the correct response. The score is the number of correct answers.

   Example:

   Jamestown was settled by (1) the English, (2) the Dutch, (3) the Spaniards.

   The Pilgrims came over to America in (1) the Maria, (2) Pinta, (3) Nina, (4) Mayflower.

   The largest city in the world is (1) Paris, (2) New York (3) London, (4) Chicago.

   The best temperature for a school room is (1) 60 degrees, (2) 68 degrees, (3) 78 degrees, (4) 88 degrees, (5) 98 degrees.

2. *The matching test.* Related terms or facts are arranged at random in two columns; the object is to indicate those which belong together. There are blank spaces before the terms in the first column and numbers before the items in the second. The pupil puts the number of each item in the blank before the item to which it is related. The longer the list, the less the chance of making a good score by guessing. The score is the number of right answers.

   Example:

Column I	*Column II*
....Mayflower	(1) Puritans
....Lincoln	(2) Dred Scott Decision
....St. Augustine	(3) Eighteenth Amendment
....Jefferson	(4) Louisiana Purchase
....Harding	(5) Fourteenth Amendment
....Mexican War	(6) Pilgrims
....Steamboat	(7) Spaniards
....Oregon	(8) Lewis and Clark

3. *The true-false test.* A series of statements are made, about half of which are true and the remainder false. The pupils take the test by putting plus before the true statement and minus before the false, using the letters T and F respectively; or, in the mimeographed form, by encircling the right letter. Seventy-five items or more should be used to give a true measurement because the guessing element here is a large factor. The test may be scored by the number of right answers, or by the number of right answers minus the number of wrong. The second method makes allowance for the factor of chance but it does not change the order of the ranks.

Example:

T F The Pacific Ocean was discovered by De Soto.
T F All bacteria are harmful.
T F Lincoln is the capital of Nebraska.

Special values of objective tests. The new forms of objective tests are rapidly supplanting the old essay type of examinations. This is owing to the many advantages which they possess, among which we may list the following:

1. *They avoid opinion in scoring.* All the scoring is alike. No matter who does it, the final scores will agree. The scorer's judgment of what constitutes a good answer cannot change from paper to paper, or from day to day. A pupil does not get a higher mark because the teacher likes him; all are treated impartially.
2. *They obviate ambiguous answers.* Pupils are forced to be brief, concise, and accurate in their answers. They cannot "get by" through bluffing or giving nearly correct answers. They either know or do not know.
3. *They obviate irrelevant responses.* Answers that do not bear on the test are ruled out.
4. *They cover a large range of subject-matter.* From five to twenty times as much material is covered as in an essay examination.
5. *They provide fine scoring units.* So many items are given that each one counts very little toward the final score. An error on the part of a pupil or of the teacher due to misunderstanding of the question, an unfair or poorly stated question, or a mistake in grading does not materially affect the final score.

6. *The units are standardized.* The matter of what to score and how to score is definitely arranged. Answers are right or wrong; there is no guessing in assigning the score.
7. *Irrelevant factors do not affect the score.* Judgment of the correctness of an answer is not affected by the spelling, penmanship, composition, neatness, personality, or influence of the pupil.
8. *They are easy to take and to mark.* They may be given in less time than essay examinations; they do not require so much writing as to exhaust the pupils. They can be scored by the pupils with a key or a stencil. The same test can be given many successive times.
9. *Standards can be developed from them.* By keeping the records made by each class, the teacher can compare her pupils and her teaching from year to year.
10. *They are interesting.* Teachers like to prepare objective tests; pupils like to take them. They are as interesting as puzzles.
11. *They are adaptable.* One or more of these forms may be adapted to any subject.

Other values in examinations. Although tests have been discussed in this chapter in relation to their use in grading and marking, it must not be overlooked that they have other values. Studies have recently shown that pupils work better when they know they will be checked up. Tests also afford a motive for review and drill, and give a basis by which class may be compared with class, and the progress of an individual pupil computed. When designed for the purpose, tests may reveal special difficulties which pupils are meeting and thus open the way to remedial treatment. Finally, true teaching success is best measured in terms of the progress which pupils make, and the teacher who realizes this will test her pupils at the beginning of the year, and again at the close, and so discover how efficient her instruction has been both independently and as compared with that of other teachers. All these values are largely

contingent on the utilization of the best and most reliable tests that can be made.

Summary. Group instruction is firmly established in the public schools, mainly because of its economical advantages. Its disadvantages are due to variations among the children in such characteristics as age, progress, achievement, intelligence, health, environment, educational opportunities, and attendance. Classification in relatively homogeneous groups becomes extremely complex and difficult. The object should be to group pupils in such a way that each will secure the maximum benefits of the training. This will require differentiation of subject-matter, easy methods of promotion, and some individualized instruction. The actual classification should be based chiefly upon marks assigned by teachers. Experience has shown teachers' marks to be unreliable, and to a large extent their unreliability is to blame for the chaos that is found in grouping. Two requirements must be met in order to improve conditions: having a reliable testing system, and having a scientific method of distributing grades. Objective tests meet the first need; the five-point system of apportioning grades meets the second.

EXERCISES AND PROBLEMS

1. List the merits and the demerits of group instruction. If possible, add to those given in the text. Point out how the most can be made of each merit. Show how each demerit may be reduced or overcome. Do the merits or the demerits dominate?
2. Look up studies that have been made regarding class size and the progress of pupils. What seem to be the general conclusions?
3. Give the advantages and the disadvantages of each special promotional scheme given in the text. Do you know of other schemes? Which is the best? Can you devise a still better?
4. What evidence can you find to prove that teachers' judgments in grading pupils on essay examinations are not trustworthy? Can you suggest an experiment to prove this?

5. Prepare a list of the merits of the essay examination similar to the list in the text for the objective test. Compare and discuss.
6. Prepare an objective examination in some school subject. Give it to a class of pupils for whom it is intended. Prepare an answer key. Have different persons correct and score the tests. Compare the results.
7. Prepare an essay examination for the same group as in question 6. Have different persons correct and score the tests. Compare the results.
8. Give all the reasons you can to show that the modern teacher needs to be skilled in the technique of the newer type of objective tests.

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CHAPTER XIII

ASSIGNMENT, STUDY, AND RECITATION

Typical school activities. In the previous chapter it was stated that learning is the result of pupil activity; teaching the directing of that activity into the proper channels. This distinction between the two processes has given rise to certain basic divisions in the work of the school, in some of which the activity of the pupils is paramount, while in others the teacher is more obviously the center of interest. These major divisions are known as *assignment*, *study*, and *recitation*. The first represents the sum total of all the factors that bring about a response from the pupils, and is quite clearly the sphere of the teacher. The second is the learning period, when pupils are making connections between stimuli in the assignment and responses. The third step is a period of teacher and pupil activity with a common purpose which varies from practice to the mastery of new materials.

It is not maintained that this combination of teacher-and-pupil activity is not to be found also in assignment and study. In the assignment, for example, as the teacher sets up the situation the pupil is busy connecting the situation with the end or purpose, and with the means or responses to be found in textbooks, maps, charts, and other sources. During the study period, when pupil activity is predominant, the teacher has the serious duty of supervision to see that desired connections are really made, and at a suitable rate. Finally, in the recitation, the teacher directs practice, corrects errors, checks previous learning, stimulates further effort, and may continue the pupils' learning process, the

last being identical with supervised study. The pupil is not passive during the recitation. On the contrary, he practices, makes new connections as errors are corrected, checks his own progress, and responds to new situations. Assignment, study, and recitation are therefore periods of activity for teacher and pupils alike.

1. **The assignment.** The importance of the assignment is readily understood when it is thought of as the stimulus-situation. It is made up of all the meaningful outside elements which the teacher can bring together to stimulate sense organs such as sight, hearing, and feeling. It is shown by tests that response is in proportion to the strength of the stimulus: a weak stimulus produces a weak and variable response. Because teachers have not realized this law they have often been content to make such assignments as, "Take from page eighty to page eighty-five"; or, "Study the next ten words." They have assumed, of course, that the textbook itself supplies sufficient stimulus. This is not likely to be true, for printed words are not nearly as stimulating as objects or persons, especially to elementary-school children. The book may not indicate an end purpose or standard so that the pupil can tell when his work is done; it may not even give adequate directions for study. In any case, the best book can be supplemented advantageously by other elements, not the least of which is the personality of the teacher.

There are four requirements which every assignment should meet, namely:

1. *It should give a clear idea of what is to be done.* A definite assignment leads to definite preparation — that is, to connections. A vague and indefinite assignment results in poorly prepared work. References to the textbook should be specific, and in terms of responses rather than in terms of pages. If supplementary material is to be used, the class should know where to look and what to look for.

2. *It should give a clear idea of why the work is to be done.* To this end the precise purpose of the work should be stated, and stated in such a way that a favorable attitude will be aroused. This may be done by making the assignment the outgrowth of some previous work. Second, it should appeal to some interest. This may be done by showing the use which can be made of the new learning, or by connecting it with something which the pupil would like to do or understand: that is, by stimulating curiosity, rivalry, approval, sympathy.
3. *It should give a clear idea of how the work is to be done.* If pupils are left without directions for making connections, they lose much time through random trial-and-error methods. Suggestions are necessary as to how to organize materials, what difficulties may be met with and how they may be conquered, and what aids and devices may be utilized. As pupils become more advanced, this feature of the assignment becomes less important; but with little children it should seldom be omitted. While care should be taken to give adequate help, it should not include what the pupil can do for himself, because this would rob him of a real opportunity to learn. Economy of time is another thing to consider. It is often better for the teacher, in order to save the pupil's time, to tell him what he needs to know rather than to let him find it out for himself.
4. *It should be adjusted to the individual pupil.* In the same class, individual differences in capacity, needs, and interests are great. Instead of making one assignment to all the class, the teacher should see that there is enough variation for all to be suited. This may be done by (1) varying the amount, (2) varying the difficulty, and (3) varying the kind, the last in such a way as to meet different interests.

When to make the assignment. There has been considerable argument as to when to make the assignment — that is, whether at the beginning of the recitation period or at the close. The general principle to follow is this: The assignment should be made at the time when it can be made most effectively, as a rule when it can be connected with previously assigned materials as a natural outgrowth of

them. If the new assignment consists in the further development of some point in the current recitation, it can be made when that point comes up in the discussion. If it is the continuation of something toward which the whole recitation leads, the best plan will be to make it at the end of the period as an outgrowth of the recitation. If a new topic is to be taken up with which the present topic has no immediate or direct connection, the assignment and development properly belong at the beginning of the recitation.

One of the main causes of poor assignments is lack of time. Some teachers delay making the assignment until the last half-minute, and then, while the pupils are collecting their books and the confusion of changing classes is on, try to set up the situation which is destined to provide stimulus for the next day's study. The result is that the teacher has time to say no more than, "Take the next lesson"; and as a consequence the next lesson is poorly prepared. The advantage of putting the assignment first is that in making it the teacher will not be crowded for time. Some teachers manage it in the following way. They conduct the recitation in the work that was assigned the preceding day and dismiss the class. They then make the assignment for recitation the next day, and supervise study on it for a few minutes before calling the next class. This gives a splendid order — assignment, study, and, the next day, recitation — and obtains the best results in learning. The recitation period may be cut short five minutes on the daily program and that amount of time put on "assignment and study."

Length of the assignment. The matter of length of the assignment deserves special consideration. If the assignment is too short, pupils get into mischief or form habits of idleness; if it is too long, they will overwork, fail to finish, or else underlearn — all disastrous consequences. The

tendency is for teachers to assign more than the average pupil can do in the specified time. It is easy for the teacher to underestimate how much time a pupil will require for completing an assignment; she forgets that a child cannot proceed as rapidly as she herself can. In fact, some teachers actually assign more work to pupils than they themselves could do in the time available. One of the writers of this book has a vivid remembrance of such a teacher in a school in which he was principal. It was her opinion that arithmetic was the most important subject in the course of study.

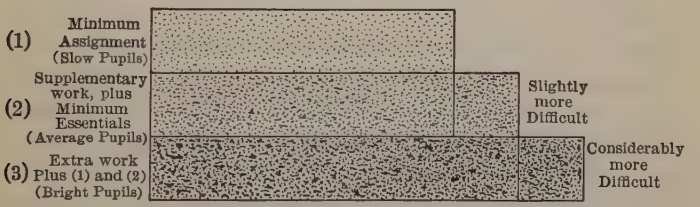
(1) Minimum Assignment (Slow Pupils)
(2) Supplementary work, plus Minimum Essentials (Average Pupils)
(3) Extra work Plus (1) and (2) (Bright Pupils)
Slightly more Difficult
Considerably more Difficult

FIG. 9. MINIMUM, AVERAGE, AND MAXIMUM ASSIGNMENTS

She made long assignments in the textbook, and supplemented them with long lists of special problems. The parents complained and the pupils cried. At length the principal asked the teacher to work out one of the assignments herself. To her surprise she found that it took her four hours to complete the assignment, though the work offered no difficulties to her. This suggests that every teacher should check her assignments once in a while by doing the work just as she expects the pupils to do it.

The length of the assignment should be determined by: (1) the difficulty, (2) the amount, and (3) the time available. To put it another way, the proper length will depend upon the ability of the pupils and the amount of time at their disposal. The rule should be to give more work to the abler pupils and to those who have the greatest amount of school

time. The assignment should not be governed by the number of pages in a text, but should be in terms of subject-matter. It may not be confined to a day's work only; it may cover a week or more. It may cover a unit of work or a topic, with no time suggestion except that it be finished as soon as possible. This will mean that there is a certain amount of work to be done, and as much will be done each day as can be covered in the time available. The daily assignments under such circumstances will consist of explanations of difficulties, or of special assignments on special topics that have arisen in the course of the main project.

Record of assignments. The teacher's record of assignments belongs in her plan book. She may prepare the assignments for a month or more in advance, each with its aim, materials, methods, motives, and standards. As they are tried out, she should make any necessary comments concerning difficulty, amount of materials, and points of interest which will help in making other assignments, or in improving those already made, for use the following year. Pupils likewise need assignment books, especially the more advanced pupils. In these books they can enter, from dictation or from the board, the problem or topics, the sources of materials, the things to do with the materials, and any other suggestions which will aid study. For young pupils, some of the elements in the assignment may be placed on the board as a guide while they work. Even a good assignment fails if the pupils forget what it is and how to proceed in its study.

2. Supervising study. Study has already been defined as pupil activity, coming as a response to stimulating and educational situations. As a result of study, satisfying and useful connections are made. The activity ought to be purposeful and of itself interesting; particularly will it mean a great deal if it promises a concrete, tangible product

which will be valued for its own sake. The writing of a composition which is to be printed in the school paper; the solution of problems, and their presentation on paper for exhibition on the bulletin board; the preparation of a piece of music to be given at the opening period — all these are as truly examples of study as are reading history, memorizing dates, practicing number combinations, and writing the rules of grammar. The fact is, much reading is not study at all. The pupils simply go over and over a selection or assignment without connecting it with what has been learned or making application of it to daily life.

In general, the pupil engages in one of four activities when studying. He practices, reads, experiments and manipulates, or combines and analyzes. In supervising study, the teacher is really supervising these different forms of activities. As our schools are now organized, reading takes up most of the study periods. The teacher's main question becomes, therefore, "How can I supervise reading?" Inasmuch as special consideration is given to such of these activities as they apply to the subjects treated later on, they will not be discussed at this time. Suffice it to say now that any form of study, to be effective, needs to be carried on with attention and under the control of that directing agent called selective thinking. Reading is not a substitute for thinking, but promotes learning only to the extent to which it is associated with past experiences.

Conditions for effective study. The first condition of effective study is a good environment. This means the absence of disturbing influences and distractions and the presence of an atmosphere which in itself encourages achievement. Conditions of quiet and attention such as prevail in a good library are standard where reading is the chief form of study; in a laboratory, where experiment is the

form of study employed; in the shop, where manipulation of tools and materials is the method; and in the office, where the work depends upon analysis and combination. Interruptions, disorder, and mischief make study impossible for any one. The school furniture should be properly adjusted. The lighting, temperature, humidity, and air circulation must be up to standard. Opportunity and comfort are the two essentials of physical environment as it is related to study.

Another requirement for effective study is that the pupil be in good physical condition. He cannot study well if his teeth or eyes hurt him, or if he has a headache. Therefore, the safeguarding of health is a means of promoting study. Attention should be paid to pupils' food habits, sleep, fresh air, exercise, and recreation; to correcting their defects of vision, hearing, teeth, breathing, and posture; to guarding them against colds and other disagreeable and enervating diseases; and to protecting them against undue weariness and fatigue. Mental hygiene should come in for its share of attention. The pupil ought not to be distracted by fear, worry, anxieties, or any other emotional disturbance. He cannot work at his best if he is being stirred up constantly by nagging and unsympathetic teachers and parents, or by bullying and teasing schoolmates. He should be encouraged and praised, not criticized and ridiculed. He should live a good normal intellectual and emotional life.

Time and place provisions. The daily program should provide a definite time for the study of every assignment. It is not enough to make provisions only for recitations. Effective study habits can be formed only if definite times are fixed for their practice, but with a regular régime it is possible to acquire such habits as easily as to acquire effective habits of eating, sleeping, and resting. The results of experiment and observation show that it is best to have

the study period follow immediately after the recitation and the assignment. The advantages of the plan are as follows:

1. The recitation and assignment create an immediate interest and incentive for study.
2. The interval between the study period and the next recitation affords time for assimilating the material. It prevents the practice of cramming for the recitation just before it takes place. It gives an opportunity for a quick review of the material just before the recitation. A review is valuable if the lesson has been carefully studied earlier.
3. When the study and the recitation of given material are on different days, a pupil who is absent for a day does not lose both the preparation and the recitation, as he would if they came on the same day.
4. It becomes easy to form the habit of immediately attacking a necessary task. Good study habits and success in life call for promptness in starting to work.
5. The assignment is clearly in mind. The pupil has not had time to forget what he is expected to do.

It is also important to form a study habit with regard to place. The place where studying is done should always be associated with work; it should never be given over to idleness. Whenever a pupil is at his desk, he should keep busy; the desk itself should always suggest studying. To this end the surroundings should be kept reasonably quiet. One of the disadvantages of home study lies in the difficulty of finding a place where the environmental conditions are good. Sometimes the light is poor; frequently interruptions and distractions prevent the student from settling down to hard work. Over-indulgent parents are likely to give too much help; ignorant parents set up wrong habits and instill wrong ideas. Weak teachers have a tendency to overdo home assignments because they like, as some of them admit, "to have the parents do the teaching, while they hear the recitations." In most cases it is best to let the school take care of the whole study problem, but if home work is as-

signed it should be in content subjects, such as literature, history, and geography: work should not be assigned for home study in arithmetic, spelling, and language.

Teaching how to study. A vast amount of information on the subject of teaching how to study has been accumulated within recent years. The suggestions given are of two kinds: (1) those for the teacher, and (2) those for the pupils. The first kind advises paying attention to the laws of learning and the conditions of study, and to considering the assignment, individual differences, distribution of practice periods, and time allotments. Although most of these suggestions place their emphasis on results, it would be unwise to ignore the way in which the results are secured. A student's ability to spell words or to work arithmetic problems may be purchased at too great a cost in happiness and health. The law of effect is not only immediate but permanent in its applications.

Since study is primarily a pupil activity, most of the rules formulated apply to the process of learning. They are important, however, to the teacher, as well as to the pupil, for it is through her efforts that they may be made to contribute, one at a time, to the child's capital of good habits. A list of thirty rules for study are given herewith, together with brief explanations of the meaning of the less obvious ones. Their incorporation in the study plan has been found to increase good results and to add to the satisfactions of the learning process:

1. Have a special time and place to study.
2. Assume a study attitude. This includes an upright posture and having all the necessary books and equipment in readiness.
3. Begin promptly.
4. Have a clear idea as to the purpose of the learning.
5. Formulate a reason for studying. This point differs from the preceding in that the purpose should be worth while.

6. Have the intention of learning. Thus, when reading is done with the intention of remembering what is read, it is more easily remembered than when there is no such intent.
7. Concentrate on the work in hand. Real attention cannot be given to more than one thing at a time. Little can be accomplished if you fluctuate from one task to another; much can be done in a short time if the attention is undivided. The ability to concentrate is the result of the habit of attending strictly to one thing at a time and one only.
8. Form the habit of independence. Do not ask help until you are convinced that the task is beyond your ability.
9. Use study aids, such as the dictionary, encyclopædia, tables of contents, indexes, and general reference books.
10. Keep a graphic record of the progress made.
11. If you make poor progress, find out the reason.
12. Apply the new learning. A thing is not mastered until it can be applied.
13. Study under time pressure. Having a great deal of time does not encourage the maximum effort which goes with the best learning. The pupil should estimate a reasonable time-limit for learning an assignment and finish within this limit.
14. Evaluate the material to be learned. That is, pick out the essential in it and give little attention to the relatively unimportant.
15. Distribute time according to the difficulty of the matter to be learned. (Unless pupils are taught to do this they will give as much time to familiar matter as to the new and more difficult elements.)
16. Get a general idea of the whole of the new material before concentrating on details.
17. Preface the study of new material by a rapid review of the old that is related to it.
18. Get the gist of the material by summarizing and learning outlines.
19. Find connections between the new material and the old.
20. Form the habit of visualization. This can be done by forming images and by re-living the experiences described on the printed page. Concrete examples should be used to illustrate abstract rules and principles.
21. Cram for immediate use only when it is necessary. Cramming is justifiable only when the material is to be used right

away, not when it is to be retained permanently. The lawyer crams for his case, the preacher for his sermon, the student for a debate. It is legitimate for a teacher to have pupils cram for an imposed examination that is not designed to test material which is useful as a permanent possession.

22. Commit fundamentals to memory. Some things are used so frequently that it pays to learn them perfectly.
23. Over-learn material that is good for permanent possession. Over-learning means more practice than is necessary for immediate recall; it is good insurance against forgetting.
24. Recall at convenient periods what has been learned.
25. Review occasionally during study.
26. Take brief intermissions between different types of subject-matter.
27. Commit to memory by wholes. It has been found that it is usually more economical to memorize a selection as a whole than to break it up into parts and memorize each part separately.
28. Find problems to be studied.
29. Plan ways of solving original problems.
30. Use all the facts that you can find.

3. The recitation. The original purpose of the recitation was to check up the results of the study period, and this is still a legitimate function. It is necessary for the teacher to know whether or not the pupils have secured the essential facts, practiced the necessary habits, and performed the assigned duties. This kind of testing makes them study better, too. However, many believe that testing has come to occupy an amount of time wholly disproportionate to its value. They feel that, since mastery of new materials is not achieved through the test recitation, it would be better, instead, to lengthen the study or real learning period. They say, too, that with the new testing devices, measurement is much simpler than formerly, and less time is required. In the face of these strong arguments it would seem that the recitation period should be put to new uses.

The first of these uses is to give additional drill. Much

drill is very dry when the pupil is working alone. He may find drill with the class made most interesting through competition, games, and a chance to participate in concert exercises. A second way to use the recitation period is for organizing subject-matter. Discussions will bring out the main points of the lesson and their supporting evidence. The various pupils' ideas may be assembled for the benefit of the whole class; questions of general interest may be answered. This last type of recitation offers one of the few opportunities in school for socialization. A third advantage offered by the recitation period is the chance of giving more time to making the new assignment and checking the old for defects. Especially when taking up a new topic is it necessary to have plenty of time in which to show how it is related to the old, analyze it, provide incentives for study, and indicate methods of work. Finally, the recitation is useful in providing for supervised study of new matter and thus advancing the learning process. What is happening in the recitation is this: less time is being given to test and drill, and more to socialization, assignment, and study.

Types of recitations. Recitations have been classified in many ways, but so far as the purposes of the teacher are concerned, they are of three types: (1) the test recitation, (2) the drill recitation, and (3) the learning recitation. The test recitation has for its aim finding out what the children know, and it can best be conducted under one of the plans described in Chapter VII. The aim of the drill recitation is to make connections permanent. The learning recitation is designed to make new connections. Drill depends for its results mainly upon the law of exercise; learning depends upon the law of readiness (see Chapter XI). In the paragraphs which follow will be given in order: (1) the principles of the drill recitation, and (2), a brief description of a form of the learning recitation.

1. Principles of drill. The following principles should be observed in the drill recitation.

1. Practice the elements in the order in which they are to be used. Illustration: teach the alphabet from A to Z, not backwards.
2. Practice on habits in the way in which they will be used. Illustration: teach grammar in connection with its use in spoken or written language; practice the number combinations as they are met with in school, not after any formal arrangement.
3. Practice on the easiest and most interesting elements first. Illustration: counting and measuring precede the fundamental operations.
4. Do not introduce into a habit an element that is unnecessary or harmful. Illustration: lip reading, counting on the fingers.
5. Drill in reference to definite situations. Illustration: train in neatness in all subjects and activities, not alone in the class in hygiene or morals and manners. The only way to secure neat papers in the arithmetic class is to drill on neatness there.
6. Drill pupils according to their individual needs. Illustration: five boys need drill on the use of was and were, the others do not; train only the five on that point.
7. Practice must be brief, attentive, carried on at maximum speed.
8. Practice should be motivated. Illustration: use games, rewards, and competition.

2. The learning recitation. The test of this type of recitation is whether the pupils have more connections at the end of the period than they had in the beginning. There are many forms, but the main ones can be classified as: (1) oral, (2) textbook, (3) topical, (4) demonstration, and (5) developmental.

The oral method has been used in this country chiefly in colleges and universities in the form of lectures; in several European countries, notably Germany, it has been used in all grades and with all classes. Where the teacher has the gift of speaking clearly, simply, and interestingly, there is

every reason for making extensive use of this method. It is most valuable among pupils who are unable to use textbooks, and is especially well suited to the teacher of primary history, health and hygiene, nature, and literature. In the intermediate and upper grades it may supplement and be supplemented by textbooks, reference books, and demonstrations.

The textbook is an essential in modern teaching. It ordinarily provides a sound organization, interesting content, supplementary and illustrative materials, and directions and incentives for study. It should not be depended upon absolutely, as when teachers depend upon the book altogether for situations and expect all responses to be *verbatim*. The formal method may be improved by using other methods with it.

The topical method works very well here. By this plan, each pupil prepares to discuss or illustrate a topic, using as sources textbooks, reference books, and his personal experiences. Other pupils and the teacher may supplement his findings. In its highest type, this form may become a socialized recitation. Although one pupil may be responsible for leading the study and discussion of a topic, all have an opportunity to see that it is developed fully and understandingly.

Demonstration is teaching through concrete illustration. The simplest way to demonstrate is to teach from the object itself. When it is not possible to bring the object to the class, the class can often make an excursion to the object. Other methods of demonstration are by means of pictures, models, charts, diagrams, stereopticon views, specimens, dramatization, apparatus, and even through oral teaching when the unknown is compared with something known, or an example or story makes the point clear.

Last is the developmental lesson, which is best exemplified

in the project. This type of lesson starts with a definite problem: What is the explanation of the mild climate along the western coast of America? or, What were the industries and customs of the people of this country during pioneer days? The next step is the gathering of data; the next the discovery of general principles that point toward an answer to the question; next, the reaching of conclusions; and last, a verification or proof that the conclusions are correct. This method does away with the need of day-to-day assignments, it is adapted to individual differences, and it is the most interesting and stimulating form of teaching to use provided the projects are well chosen.

Questions and answers. The separation of recitations into types and forms does not mean that these different kinds are not to be found in many combinations in actual teaching. In point of fact they are. In the course of a recitation in language, there may be drill, telling, textbook use, topical reports, discussion, development, and demonstration. This is advantageous because it gives variety and also insures the method being kept in its place as a means to an end and never allowed to become an end in itself. It is in this general type of recitation that we find the so-called question-and-answer method. To such a great extent is this method used that one feels like criticizing recitations in the same way that a boy criticized his textbook, as "All questions and no answers." Questions are not successful media of instruction unless they evoke responses. It is known that examination questions bring out only about one tenth of the information that pupils actually possess on the topic in hand, so it may be assumed that oral questions are limited in their value as stimuli. We find, therefore, that questioning by either teacher or pupils is properly restricted in its use to five situations:

1. When the issues involved are not clearly perceived; for

example, Was the war with Spain fought for the purpose of extending our territory?

2. When the implications of a general conclusion are not clearly perceived: Did the location of Minneapolis on the falls of the Mississippi alone determine that it would become a great city?
3. When additional conclusions are justified by the facts: Did the acquisition of Oregon signify the withdrawal of the British from California?
4. When data are presented without conclusions: Was the aid of France essential to American success in the Revolution?
5. When there is a wish or need for information that is not brought out in the recitation.

There is a growing belief that it does not pay to use the question method as a drill device. Thus, if it is necessary to drill on the names of the capitals of the States, there are more economical methods than asking, in turn, "What is the capital of Alabama?" "What is the capital of Arkansas?" Such questions as "What are the duties of the Secretary of State?" "What is nine times seven?" "When was America discovered?" are largely ineffective in teaching. Assuming that the question method will be used from time to time, it may be said that the following are the best rules to adopt:

1. Know the purpose of the question. Let it be asked in order to obtain needed information, to provoke thought, to provide practice, to emphasize essentials, and to maintain interest.
2. Socialize the questioning. Address the whole class; then call upon some individual for an answer.
3. Ask comprehensive questions. Avoid questions on detail that tend to become petty. The response should usually be a topical recitation.

Many other rules have been formulated to guide questioning. We have been told not to ask questions which suggest the answer; as, "Is six times six thirty-six?" or, "America

was discovered in 1492, wasn't it?" We have been told not to ask questions that can be answered by "Yes" or "No"; as, "Was Lincoln the first President of the United States?" These rules are in general very good, but it is better to follow this principle: *Let the type of question be determined by your purpose in asking it.* Usually the teacher's reason for not asking leading questions is that they serve no purpose. Sometimes she will want to ask the kind of questions that can be answered by "Yes" or "No," and will hold the pupil firmly to that type of answer. The main points to insist upon in answers are accuracy, intelligibility, and completeness. If the question is "When did Columbus discover America?" the answer, "1492," is complete, accurate, and understandable. It is a mistake to let pupils respond by first repeating the question or by giving an answer in a complete sentence, and a mistake for the teacher to repeat the answer.

Summary. The typical activities connected with learning are assignment, study, and recitation. These correspond with the basic principles of stimulus, connection, and response. The assignment is the stimulus situation, or at least an important factor in it, and should be made clearly and definitely, and be well motivated. Study is pupil activity as a result of a stimulating situation. It depends for its success on the student's having a suitable environment and being in good physical and mental condition. It should be guided by established principles of learning. A suitable time and place for study are essential; the trend is away from home study and toward directed study at school. The recitation affords opportunities to check up on connections, correct errors, give practice in drill, motivate learning, socialize and improve assignments, and teach new matter. Recitations are for three purposes: testing, drill, and learning. A greater proportion of the total school time

than is now devoted to learning should be given to the last type of recitation.

EXERCISES AND PROBLEMS

1. Outline an argument to show that the assignment is the teacher's most important classroom function.
2. Give illustrations showing when an assignment can be effectively made: at the beginning of the recitation period; at the end; at some time during the period. Granting that everything else is equal, give all the advantages and the disadvantages you can of each of these times for making an assignment.
3. Show how the length of the same assignment can be varied among the pupils according to their respective capacities for work.
4. Gather together all the suggestions you can find for teaching pupils how to study effectively. What practical use can you make of this list?
5. Suggest how the recitation period may be made most valuable. Are there any indications that the old recitation period is passing out of use in the modern school?
6. Make a list of questions some of which you consider good, some bad. Give reasons for your opinion.
7. Describe what you understand a socialized recitation to be. What are its advantages and its disadvantages?

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CHAPTER XIV

ORAL AND SILENT READING

Importance of reading. Even in the old days of the three R's, reading stood at the head of the list. It still stands there. In the lower grades, one third of the school time is allotted to reading; in the upper grades, ten per cent — more time than any other subject receives. Not only does reading occupy this large place in the daily program, but most of the study activity in geography, history, literature, physiology, language, and all other subjects consists of reading. Inability to read is the foundational cause of failure among pupils. In the primary grades, promotion is almost entirely dependent upon achievement in reading; in the other grades, the subject ranks equally or a little above any other. Moreover, failure in arithmetic, language, science, history, and hygiene may be traced quite as often to inability to read as to actual inability in those special processes. On the bases of time allotted and of relation to school success, reading is the most important subject in the curriculum.

The nature of present-day life is such that a person can hardly exist without being able to read. Whoever has something to sell, whether it is wheat, automobiles, or his own service, must be able to read price quotations and advertising. Intelligent buying, also, rests upon the buyer being able to read understandingly. Personal safety hinges upon ability to read signs, warnings, and directions, a fact proved by statistics of accidents, which show that the illiterate are more likely than others to be the victims. Every one needs to know how to read telephone directories, telegrams,

and letters. The news of the day and the innumerable shifts and changes in human affairs which affect every one can scarcely be known except through the printed page. Magazines, newspapers, pamphlets, bulletins, and books are the means by which the modern man continues his education; they are also with many the chief sources of recreation. In business, professions, and civic life, and in cultural and recreational pursuits, reading is the universal reliance.

Oral and silent reading; relative emphasis. Up to five or ten years ago, the recitations in reading were given over almost entirely to oral activities. Of late years many criticisms have been directed against oral reading, and the trend is now sharply toward silent reading. Let us first consider the most formidable objections to oral reading:

1. It is wasteful of time. Only one pupil reads, the others listen or are idle. Only a small amount of material can be covered, because the rate must necessarily be slow. A pupil cannot read any faster orally than he can make word-eye-voice connections; he cannot read fast and be intelligible.
2. It brings about the formation of bad habits. These are word reading, slowness of rate, lip movements, and vocalization. Progress in rate and comprehension is reduced and interest lessened.
3. It is not in accord with life practices. Actually no more than five or ten per cent of adults do any oral reading; every one has to read silently.

The effect of such arguments as the above has been to lessen the amount of time given to oral reading. In some schools, the teaching of oral reading is now almost unknown. This, however, is a mistake, for there are many reasons for the practice sometimes of oral reading; it should not be altogether neglected. Taking the elementary school as a whole, it is advisable to give to oral work half of the total time set aside for reading recitations. This arrangement guarantees plenty of time for silent reading. It gives to

it all the study periods in reading and in other subjects where reading is the method of study, such as history, language, and geography, and in addition there is much practice in reading outside of school. Half the recitation periods means only one fourth of the total time assigned to reading; that is, the allotment for silent reading would still be three times as large as that for oral reading.

Aims of reading. The values in reading can be seen by considering the aims. Take oral reading first. To be able to read aloud well is to have at command a great source of enjoyment. There are still to be found homes in which one member of the family reads to the others, and there are numerous occasions in school where children may entertain others by reading aloud. There are several vocational openings to good oral readers: radio announcing and speaking, taking inventories, teaching, and acting as reading clerks in offices and legislative assemblies. Oral reading affords an opportunity to develop control of the speech organs that is not found in any other school activity; it tends to develop personality, and it aids in forming good speech habits. These three chief values of reading — recreational, vocational, and developmental — may be expressed in such concrete aims as the following:

1. To train the reader in the art of interpreting the feeling and thought of others
2. To teach him correct enunciation and pronunciation, and to eliminate his speech errors
3. To help him develop control of his speech organs
4. To develop his personality by helping him to overcome nervousness and timidity and to cultivate poise and composure
5. To obtain and give him information
6. To increase his vocabulary
7. To train attentive listeners

Silent reading offers a more limited number of aims than does oral reading, but its values are greater. As a means of

enjoyment it has no superiors. It enlarges the reader's experience, and as a means of entering into the thoughts and feelings of others is not excelled even by art and drama. It has direct vocational values, but it serves best indirectly as a means by which useful facts and information can be obtained. It enhances the speaking and writing vocabulary, especially the latter. Its aims may be stated as follows:

1. To provide indirectly a large variety of experiences
2. To furnish a tool for obtaining information
3. To increase the vocabulary
4. To give enjoyment

The reading process. The basic technique of reading must take into account the physiological processes involved. First, the eye makes a series of movements across the page. It pauses between the movements and is fixated upon a word or a group of words. It is during the fixation period that learning takes place, for nothing is seen while the eye is in motion. At the end of the line, a regressive movement is made to the first word in the next line, after which the broken sweep across the page continues. The rate of reading depends upon the speed of movement of the eyes, the length of the span, the duration of the fixation, the freedom from re-reading (that is, letting the eyes glance back over what has been perceived), and the accuracy with which the eyes "hit the right place" when returning to the left side of the page for a new line. The good reader makes rapid rhythmic and progressive eye movements, with short fixations and a long perceptual span.

Long fixation is due to unfamiliarity with words and to natural or acquired slowness in responding. The remedy is sight-word drill, easy selections, and practice in reading as fast as possible. Short perceptual spans are due to hav-

ing difficult material; to the habit of reading slowly and of reading to answer questions, summarize, or make outlines, instead of reading to understand. Training should be given in reading sentences and phrases instead of single words; flash cards and perception cards supply a suitable device for this purpose. Single words are used at first, next phrases, and finally sentences. The place for this training is in the first four grades.

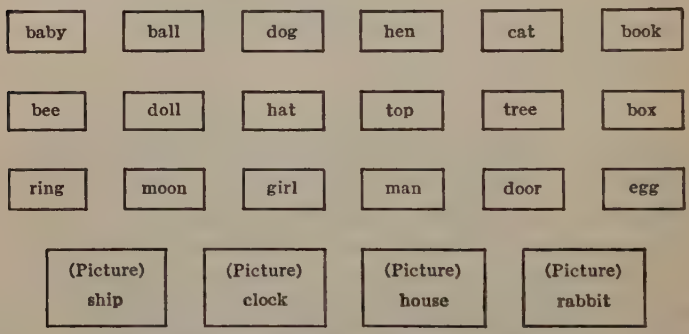

FIG. 10. SIGHT CARDS FOR FLASH-CARD DRILL

No unnecessary movement or response should accompany reading. One of the worst habits to get into is vocalization, which is the act of whispering the words read or moving the speech organs while reading silently. Once the habit is acquired it is hard to eliminate, but at least the grosser forms of lip movement and audible speaking can be restrained. Finger pointing is another bad habit; so is moving the head instead of the eyes. The only noticeable activity during the silent-reading process should be the proper eye movements. It should be explained to children that they will read more rapidly and understandingly if they will not move their lips, pronounce the words to themselves, nor point at the words.

Rate of reading. The two factors which determine reading efficiency are rate and comprehension. Rate has been much neglected, consequently, as a rule, pupils read too slowly. The fastest readers generally comprehend the meaning of the text better than do the slow readers, and every pupil should be trained to read as rapidly as his nature will permit. The habit is learned by consistent practice in rapid reading. Standards toward which the teacher should aim are shown on the next page.

There are two leading methods by which the rate of reading may be improved: (1) the elimination of causes for slow reading, and (2) the adoption of positive methods of increasing speed. These causes and positive methods are:

I. *Causes for slow reading*
   1. Failure to recognize the importance of speed in reading
   2. The false idea that reading thoughtfully means reading slowly
   3. Reading to answer questions, summarize, or outline
   4. Lack of motive for reading (poor assignment)
   5. Vocabulary difficulty
   6. Poor eyesight
   7. Uninteresting materials
   8. Unfamiliarity with materials (lack of related experience)
   9. Lack of a standard of achievement
   10. Poor eye movements
   11. Lack of practice (insufficient reading material)
   12. Vocalization (lip and tongue movements, inner speech)
   13. Short perceptual span
   14. Inferior materials — small type, insufficient spacing, lines too long, too short, or uneven, poor paper, dim printing.
   15. Too much emphasis upon letters and words, which is a result of learning by the ABC, word, or phonic methods

II. *Means of increasing rate*
   1. Recognition of the importance of rapid reading
   2. Motivation by competition, speed tests, and progress charts

3. Speed drills
4. Supplementary reading for the story
5. Emphasis upon meanings rather than upon mechanics
6. Drills to increase the perceptual span
7. Teaching reading by the sentence method and its combinations
8. Mastering a good vocabulary

Rate of reading varies with the difficulty of the material, the purpose for which it is read, and individual differences in the ability of pupils. Rate, considered alone, is not significant, because speed may be purchased at the cost of comprehension. A standard of rate which has been generally accepted is that pupils should be able to read a four-hundred-word passage of easy material and reproduce half the ideas it contains at the speed of

160 words a minute in grade IV
180 words a minute in grade V
220 words a minute in grade VI
250 words a minute in grade VII
280 words a minute in grade VIII
320 words a minute for an adult

Comprehension in reading. The ability to understand what is read is one of the major objectives of the elementary school. If necessary, speed must be sacrificed to that end. Comprehension means the ability to attach the proper meaning to word, phrase, and sentence, and to understand relationships between sentences, paragraphs, and the larger units of a composition.

The main causes of lack of comprehension are:

1. Insufficient vocabulary
2. Poor method of reading
3. Insufficient practice in careful silent reading
4. Indefinite assignments
5. Uninteresting materials

6. Lack of motivation
7. Lack of skill in using reference books
8. Insufficient experience and immaturity
9. Emphasis upon word-getting rather than upon thought-getting
10. Failure to have standards that are to be realized

Some ways by which comprehension may be increased are:

1. Opportunity for a large amount of practice on interesting materials
2. Special attention given to vocabulary building
3. Answering questions after reading
4. Acquiring information for a reading background
5. Keeping and charting records of individual and class achievement
6. Motivating the assignments
7. Training in using the dictionary and other reference books

Materials in reading. Reading materials may be classified into three divisions: (1) local, (2) textbook, and (3) supplementary. Local materials consist of directions for games, signs, slogans, mottoes, and all of the various sentences prepared by the teachers and pupils in the school. Textbooks include the materials adopted from readers, histories, geographies, and other books. Supplementary materials comprise all the available readers other than the basic texts, science readers, history readers, fiction, stories, poetry, essays, newspapers, magazines, and everything else not clearly belonging in the first two classes. The law of readiness is of special import when applied to materials, for learning can never be advanced by insisting on pupils reading what fails to give them satisfaction. On the other hand, they will learn to read by using materials that are interesting even though lacking somewhat in style and finish. It is better to omit selections from the readers that do not claim the pupils' attention, have the interesting ones re-read, and give the children more or less a free hand in

finding something that appeals to them in the local and supplementary matter.

Qualities which make for interest in reading materials are:

1. Dramatic action and excitement
2. Having chief characters correspond, in age, to the readers
3. Familiarity of subject-matter, easy content
4. Presence of romance, heroism, and adventure
5. The setting-forth of superior character traits such as kindliness, sympathy, courage
6. Humor and cheerfulness
7. The fanciful element
8. A good story to be told
9. Conversation

Qualities which make a selection unpopular are:

1. Much description, analysis, and argumentation
2. Abstractions, dull details, dates
3. Ideas removed from child experiences
4. Over-sentimentality, babyishness
5. Adult interests and points of view
6. Sad and depressing atmosphere
7. Moralizing, preaching
8. Lack of strong-story element
9. Horror and supernatural elements

Basis of general method of teaching reading. As a basis of a general method of teaching reading there are three principles to remember — the importance of: (1) securing the interest, (2) emphasizing essentials, and (3) socializing. The principle of interest corresponds to the law of readiness. After it is certain that the reading selection will really appeal to the class, such an assignment should be given as will make the pupil curious and eager to find out what the story is about or what information the article contains. The teacher should not tell the story, for that would destroy the reason for reading it. She should call attention to the title

and to any pictures there may be, and may give a few details concerning the tale. The second principle, emphasizing essentials, may be carried out by skillful questioning of the pupil after the reading, by directed re-reading, by letting the pupils tell the story, and by dramatization. As has been indicated, it is not a good plan to read to answer questions, make outlines, or list important points. Any of these aims confuse the reader and detract from his interest and from his learning. They can be attended to after the reading has been done. If any re-reading seems necessary, it should be on parts that have not been well comprehended.

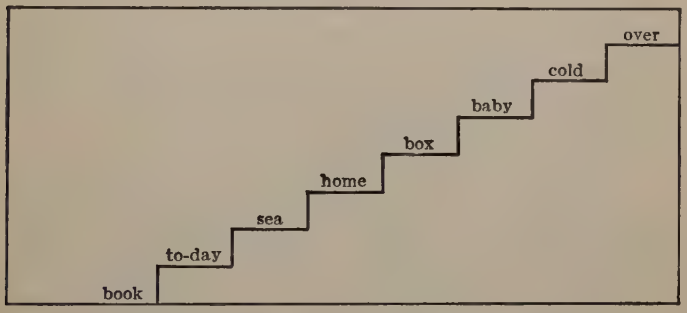

FIG. 11. DEVICE FOR WORD DRILL — CLIMBING THE STAIRS

Socialization supplies motives and also gives gratification in successful performance. It requires audience situations and group organization. Reading to the entire class, to a group of four or five, to the parent-teacher association, or to some one at home are devices that provide audience situations. Reading clubs, competing groups, library references, and current-events committees are means of promoting group organization. A good plan is to organize several competing groups and have each group keep and post a record of the outside reading of the members. A library project, in which pupils make up book lists and start a col-

lection of books for their room, also stimulates general reading. (See pages 444–446.)

Special methods of teaching reading; initial period. The initial period covers the first and second grades. The object here is to make the right beginning and to create permanent reading interests. The first six or eight weeks should be devoted to both silent and oral reading, mainly to the latter. It is best to use local materials at first. A list of easy sentences may be obtained by asking the children to tell what they did yesterday or on Sunday. These sentences, written or printed on the board or on charts and cards, form good material for beginning reading. They stand for pupil experiences, and the result is that from the first the pupils comprehend what they read. Other sources of material are pictures, child stories, objects, games, how to do something, and descriptions of people.

Start →

First Team									
	day	eat	sit	box	door	yes	low	soft	yard
	bring	tell	five	ball	law	ask	just	way	get
							→		End

Start →

Second Team									
	home	much	call	long	love	then	house	year	send
	one	has	some	how	them	baby	well	men	ran
								→	End

FIG. 12. DEVICE FOR WORD DRILL — BOARD RELAY RACE

After a few weeks of reading from charts, cards, and the board, books should be put into the hands of the pupils. This is the time to teach them how to care for books — how to open a new volume, how to turn the leaves, how to keep the cover clean and the pages unsoiled. Preparation for the use of books consists in giving an assignment which calls attention to interesting items such as the title, the illustrations, the characters, the events, and anything else that ap-

peals to children. The pupils may tell the story of the pictures, the teacher writing the sentences on the board. This, at first, rather than book sentences should make the reading lesson. The book should then be read as rapidly as possible. In the course of a year, a beginning group should read from ten to twenty primers and first readers. The children should not be required "to take a lesson over," but re-reading should be based upon selections of their own choice. If supplementary readers cannot be obtained, extra material of a local nature and easy reading from children's magazines should be used.

Some authorities advise against having oral and silent reading from the same texts, because they believe it slows down the rate of silent reading. In most reading series, however, selections of both kinds will be found — those that are well adapted to oral reading and those that are well adapted to silent reading. A compromise may be effected by saving some lessons for silent reading and some for oral reading. Phonics should be begun at the end of the first two or three months and continued, on the average of one short period a week, for two or three years. This period for phonics should be distinct from reading and should not be connected in any way with silent reading. The old idea of phonics was that they aid children in mastering words, which, of course, meant in pronouncing them. Children "learned" to sound words which had no meaning to them. This laborious process reduced reading rate nearly to zero, and added nothing to comprehension; in fact it deluded the teacher into the idea that the ability to sound a word signified that the meaning of the word was comprehended. Phonics are now conceived as serving their chief purpose by teaching control over the speech organs and making for clear and correct enunciation. Drills on difficult sound-combinations such as *sk*, *ing*, *th*, *ch*, *am*, *en*, *or*, *wh*, *ld*, *est*,

and so forth, in words encountered in oral-reading lessons are more important than is learning long lists of phonograms.

There are many exercises which motivate and give meaning to reading. Among them are:

1. Dramatization: pantomime, reading parts, spoken parts
2. Illustration of reading lessons on the sand table
3. Drawing, coloring, and paper-cutting, illustrating reading lessons
4. Story hour: the children tell stories that they have read

The second period. The perfecting of good reading habits should be the aim of the second period, which includes the third and fourth grades. If the teacher cannot make rapid readers out of children by the time they finish the fourth grade, the task thereafter is almost hopeless. Much practice should be had in reading easy materials in the library or in the pleasure-reading period. Speed may be developed by having the pupils see how much they can read in a given time. A proper check on informational reading is to see how much each pupil can reproduce; the best check on recreational reading is story-telling, dramatization, and illustration. This is the period in which to stress independent reading — through the library hour or the reading club, or with stars and other awards for outside reading.

Drill should be an important feature of this period. It should not commence until the pupils are well started, and it should be based upon needs arising in the reading periods. Its chief aims are: (1) to increase the rate, (2) to promote word recognition, (3) to correct errors, and (4) to give ability in using the dictionary and other reference books. Suggestions in connection with these several points are:

1. *Rate:* Use easy, familiar, and interesting materials with a time limit, and make a determined effort to increase speed. Keep a record of results.

2. *Recognition:* In a first hasty reading, let the pupils make up lists of words they do not know. The means of recognizing them are then found through the dictionary, dramatization, objects, and illustrations, and the re-reading of the selection.
3. *Correct errors:* Use phonetic drill and pronunciation, using the board, charts, and flash cards.
4. *Using the dictionary:* Practice rapid, alphabetical arrangement of words written on small cards. Have contests in finding words in the dictionary.

Independent reading can be motivated as follows:

1. Pupils find interesting stories and read to the class the most interesting passages.
2. Pupils bring their magazines and favorite story books to school for other pupils to read.
3. The teacher tells part of a story in order to arouse interest, the pupils reading the remainder.
4. Reading projects are organized and an award given to the pupils who make the best records.
5. Scrapbooks are prepared from interesting clippings from magazines.
6. Reading aloud to parents is encouraged.

The third period. The objective in the third period (grades 5–8) is to secure variety of experience through wide reading. This can be gained by using much supplementary material on travel, biography, adventure, history, science, industry, invention, and all the other fields of life activity. It is at this age that romance and heroism make strong appeals. The pupils will enjoy now *Robinson Crusoe*, *Hans Brinker*, *The Call of the Wild*, *Uncle Remus*, *The Wonderful Adventures of Nils*, *The Wonder Book*, *Jim Davis*, *Little Smoke*, and *Captains Courageous*. Books on chemistry, radio, natural history, explorations, inventions, pioneer life, forestry, geography, electricity, wood work, and history supply materials needed for the work-type of reading.

Poetry has been found to be somewhat unpopular with

school children. In this period, however, if interesting poems are selected poetic appreciation may be developed. Poems that tell a story and that deal with simple sentiment are preferred. The teacher, if she reads well, should begin by reading aloud to the class for a few minutes, later asking pupils to read from their favorite poems. Instead of assigning poems for reading lessons, it is well to let the pupils choose what they shall read. Memorizing choice selections does not fit in well with motivation, unless the purpose of the memorizing is preparation for reciting the selections before the school or some gathering; in that case the work should be done voluntarily. Any other memorizing should be by the "wholes" method, through successive re-readings because the poem is liked. Needless to say, it is a mistake to give any time to the critical analysis of a poem, or to base questions and exercises upon it. Instead, let the poem make its own effect; if it cannot do that it is not suited to the pupils. The best thing a teacher can do is to induce a favorable attitude toward poetry that will cause the children to look, of their own accord, for interesting verse, and to re-read whatever makes a favorable impression upon them.

Reading of the study type should be confined largely to the preparation of lessons in other subjects and to informational reading in supplementary materials. The object in such reading is interpretation and use of the results, and this procedure may be directed by reading for such purposes as the following:

1. To find the central thought in the passage
2. To answer questions that deal with central points
3. To prepare an outline of what is read
4. To discuss statements, and reach conclusions as to their truth
5. To present meanings in the form of summaries
6. To apply the reading to the solution of a problem
7. To use the material read in making something, playing a game, or in some other way

8. To remember what is read, not in a rote form but in substance

A lesson plan. The lesson plan which follows may be used to illustrate the teaching of silent reading: [1]

TEXT: *The Lincoln Reader*, Book IV, pages 174–75. Time, 15 minutes.

TOPIC: The Switch Parade.

TEACHER'S AIM: To have the children read with speed, understanding, and interest.

PUPILS' AIM: To find out what is a "Switch Parade."

APPROACH: The Switch Parade is a very strange name for a story. See whether you can think of a better name after you have read this, or whether you think the name is the best one the story could have. Have you ever heard of a ceremony for planting trees? Have you ever heard of Arbor Day? What is it we do on Arbor Day? (Plant trees.) A long time ago in a little town in Switzerland, some of the people wanted to plant trees, and they had a very hard time doing it. Have you any idea why they had a hard time? Let us read the story and find out. First, however, we want to be sure that we know all the words which might keep us from understanding the story.

1. Present new and difficult words;

Swiss	sprout
Brugg	furrows
the common	grove
wheat roll	saplings
switches	transplanting

PROCEDURE: Open your books to page 174.

1. Find out what the people of Brugg did after they decided to plant an oak grove. (Planted acorns in holes made with sticks.)
2. What may be the explanation of why the acorns did not grow? (Planted too deep, or earth packed too hard.)
3. What did the people do after the crops of oats and rye had been gathered? (Planted acorns in another way, by sowing them in furrows.)
4. What method of getting an oak grove finally succeeded? (Transplanting saplings.)

[1] Prepared by Margaret Chandler, Stanford University.

5. What did the people decide to do in order to celebrate their success and show their pleasure? (Have a transplanting day as a yearly holiday.)
6. What kind of ceremony did they observe? (Children march to the oak grove singing and waving branches.)

TESTING PROCEDURE: What did we want to find out when we started to read this story? (What is a Switch Parade?) Can you tell now what a Switch Parade is? Do you think the name is a good one?

Diagnosis and remedial measures. The deficiencies of pupils can be found in three ways: (1) by careful observation of their reading, (2) by testing, and (3) by an intensive study of related facts such as intelligence, vision, emotional instability, and standing in other subjects. Once the deficiencies are found the causes are often plainly evident, and the causes in turn point to the necessary remedial measures. By way of illustration a list is given below of a few of the chief defects in reading, with explanations of the causes and suggested treatment:

Case I.

1. *Defect:* The pupil reads slowly, repeats words, hesitates, and then halts while he tries to spell or sound out words.
2. *Cause:* Difficult material, insufficient vocabulary, lack of drill on sight words.
3. *Remedy:* Provide vocabulary drill, give much practice on easy materials, and motivate by providing audience situations.

Case II.

1. *Defect:* Mispronounces words, substitutes other words, brings in words not in the text.
2. *Cause:* Difficult material, lack of interest, speech difficulties, timidity, nervous troubles, lack of sight words, defective vision.
3. *Remedy:* Emphasize silent reading, give individual drill orally on easy materials by flash-card method, require careful preparation with self-practice before reading to group.

Case III.

1. *Defect:* Inability to comprehend, cannot answer questions and reproduce, cannot pick out essential ideas.
2. *Cause:* Overemphasis upon mechanics, as, for example, learning to pronounce words with reference to their meaning. Lack of attention; no motivation.
3. *Remedy:* Give more attention to silent reading, with practice in outlining, reproducing, and answering thought and information questions on short and simple selections.

Case IV.

1. *Defect:* Reads word by word, with lip movements and whispering.
2. *Cause:* Overemphasis on recognition and ability to call words; much oral reading and phonic drill.
3. *Remedy:* Give more silent reading, and see that vocalization is restrained. Practice reading whole sentences from board and cards.

Case V.

1. *Defect:* Reads rapidly, but can recall little or nothing of what was read.
2. *Cause:* Lack of interest in materials, speed stressed above meaning, not enough practice in story telling, dramatization, and socialized activities.
3. *Remedy:* Motivate by group work in which four or five pupils in a group read in turn to one another; insist upon re-reading to answer questions and tell the main facts.

Tests and standards. Progress in reading may be greatly facilitated by tests and standards. The best Standard Test is that by Gray (Public School Publishing Company, Bloomington, Illinois). Progress in rate, in accuracy, may be measured for grades 1–8, and defects discovered. There are also some standards which the teacher can apply in judging oral reading and establishing good habits. A list, which may be written on the board, includes such suggestions as:

1. Take an easy erect posture.
2. Hold the book properly.
3. Do not read in advance to yourself with lip movements.
4. Enter into the spirit of what you read.
5. Speak so that you can be clearly understood.
6. Do not point with the finger or move the head.
7. Read in such a way that others will enjoy hearing you.

Oral reading should be tested or checked every two or three months: silent reading twice a year, one month after school begins and one month before it closes. There are many good tests to select from, but it is suggested that beginning teachers choose one of the following three:

1. Monroe, W. S. *Standardized Silent Reading Tests.* Public School Publishing Company, Bloomington, Illinois. Test I for Grades III–V, Test II, Grades VI–VIII. Time, 4 minutes.
2. Stone, C. R. *Narrative Reading Tests.* Public School Publishing Company, Bloomington, Illinois. Grades III–IX.
3. Courtis, S. A. *Silent Reading Test.* Author, Detroit, Michigan. Grades II–VI.

Informal tests. While standardized tests are useful because they enable the teacher to determine whether her class is up to average, they do not take the place of those informal tests which the teacher prepares. The informal tests should be a part of the regular instruction. They can be made to fit the particular needs of a class, to add to interests, to determine rate and comprehension, and to diagnose difficulties. The illustrations which follow show what can be done.

1. Choose an easy selection of about four hundred words. Material used in the grade preceding the one being tested is suitable. Make out ten or more questions covering the main thoughts in the passage. Then show the class where to begin reading, and tell them that the purpose of the exercise is to test their speed and their ability to understand what they

read. At the signal "Go" all begin reading and continue until one minute elapses. The pupils mark the word they were reading when the signal to stop was given, and then continue reading to the end of the passage. When they have finished, write the questions on the board and have the pupils answer them. When this has been done, ask each pupil to count the words that he read in one minute. Each pupil's score for speed and the number of questions that he answered correctly should be written on the board opposite his name. A test such as this may be given two or three times a month; it may be varied on occasion, by having two readings before answering the questions or measuring speed.

2. Have the pupils read silently for four or five minutes the assignment in geography, history, or hygiene. At the end of the test period, have them count the number of words read and answer a set of questions based on the reading. The rate and comprehension can then be obtained as in suggestion 1.
3. A combined test of oral and silent reading can be planned as follows. Have each pupil read orally for a minute or two, and at the signal "Stop" mark the last word that he has read. Have them count the number of words, and then, beginning at the points where they left off, read silently for the same length of time that they read orally. Again let them count the words, and then place the scores on the board opposite each name. Comprehension can be tested for each type of reading by thought questions. The comparison of scores furnishes a good basis for the discussion of oral and silent reading.

Summary. Reading is the most important subject in the curriculum. More attention should be given to silent reading than to oral reading in study, but the recitation time for the two should be equal. Enjoyment, information, experience, and physical and mental control are the chief aims; rate and comprehension are the basic elements in the process. Teaching chiefly centers around the question of how to improve rate and how to improve comprehension. Materials are of three kinds: (1) local, (2) textbook, and (3) supplementary. Local materials are used in beginning:

texts are depended upon for the mechanics and technique, and supplementary materials for practice, enjoyment, and experience. Basic elements of method are interest, emphasis upon essentials, and socialization. Under special methods, three periods are distinguished: the initial step, where simple learning and permanent interests are formed; the second period, where early habits are extended and made permanent by motivated practice; and the third period, which is characterized by extensive and varied reading. As defects appear, their causes should be discovered and the errors eliminated.

EXERCISES AND PROBLEMS

1. Give all the reasons you can why a functioning member of modern society to-day must have the ability to read. Show how the ability to read may be abused by substituting reading for thinking.
2. Justify placing emphasis on the teaching of silent reading.
3. Give all the reasons you can why some oral reading should be taught. In what ways may emphasizing it prove a hindrance to silent reading?
4. How should your procedures differ in teaching reading for information and teaching it for recreation?
5. Why did the teaching of silent reading lag behind the recognition of its importance?
6. Explain the physiological processes in silent reading. Why is a knowledge of them important?
7. What is the relationship, in reading, between speed and comprehension in reading? Plan an experiment for proving this relationship.
8. Suggest devices for reducing vocalization; for increasing the perceptual span.
9. Suggest methods for increasing speed of reading; for increasing comprehension.
10. Describe the school library that you would like to have in your school. Tell how you would plan to use it to the best advantage. Make a list of some of the books and magazines that you would have in it.
11. Prepare a lesson plan for teaching either silent or oral reading.

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CHAPTER XV

TEACHING ORAL AND WRITTEN LANGUAGE

What language is. In the preceding chapter, it was seen that reading has to do with the understanding and interpretation of the words or language signs made by others. In contrast, language has to do with the speaking of words and with the execution of language signs, as in writing, which stand for ideas. Reading is receiving; language is expression. The stimulus in reading is the printed or written page; the response in language is the written page or oral expression. This is to say that reading and language are just reverse sides of the same thing — the communication of thought.

The specific nature of all learning should not be overlooked in language. Suppose that we consider the four major phases of what is commonly called English — reading, understanding spoken words, speaking, and writing. The connections which make up knowledge or skill in any of these activities are between neurons located in widely separated areas of the cerebrum. The ability to read is located in the visual area; the ability to understand spoken words, in the auditory area; the ability to speak, in the motor area

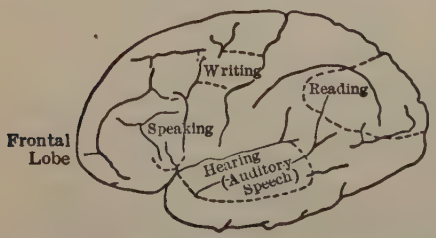


FIG. 13. DIAGRAM OF THE BRAIN, SHOWING LOCATION OF READING, WRITING, AND SPEAKING CENTERS

near the center governing the muscles of the head; and the ability to write, in the motor area near the center that governs the muscles of the arm. The development of any one of these phases does not necessarily improve any of the others. A person may be a good silent reader without being able to express himself effectively in oral and written language. Understanding what we hear does not necessarily make us able to express it well. The point is that each of these four phases must be taught specifically. Unless actual connections are made between reading and language, progress in one does not mean progress in the other.

Oral and written language; relative emphasis to be placed on them. While due attention should be given to both oral and written composition, the former is by far the more important. It is used to a much greater degree than written language both in school and outside. Practically all language usage is oral; the average adult uses written composition very little in his everyday life. It also requires special attention because, in its extensive use in the informal associations outside of school, it is particularly susceptible to misuse. In the home and the community bad language habits are imitated. Written composition is more closely restricted to forms fixed by the school, and is usually freer from errors.

In the first and second grades, nearly all language should be oral. For the next two grades, a fair division is on the basis of one period of written language a week and four periods of oral language. For the remainder of the elementary school, two periods may well be given to written language and three periods to oral. The actual amount of practice in both will be far more than the time set aside on the daily program will show, because language is used in the teaching of every subject and in carrying on every activity

in school. In silent reading and in all study periods, written composition is the medium, and recitations employ much oral language. If the standards of usage in the other subjects are as high as the standards in the language classes, then all the school subjects have a contribution to make to language efficiency.

Aims of language. All of the essentials to be treated in language teaching can be summarized under three words: *accuracy*, *force*, and *charm*. Accuracy insures the speaker or writer being understood as he wants to be understood — an aim often expressed as "Say what you mean." Force gives vividness and strength to the spoken or written stimulus. Charm is the quality which insures that the response will be favorable; the term refers to pleasing qualities of style and tone.

The standard of proficiency in each of these qualities should be determined in the largest degree by social needs, though it is inconceivable that any one who observes the principles of accuracy, force, and charm will ever speak or write too well. This standard of proficiency can easily mean that there ought to be school training given under conditions that parallel situations in real life. With oral language this would mean training in the art of addressing people, in conversation, in relating experiences, in asking for information, and in telling stories. Abundant material for practice in this kind of oral composition is available through the pupils' personal experiences; the content subjects such as reading, history, and geography; games; home life; and special interests. With the typical individual, the everyday uses for written composition are rather limited. They consist of the preparation of friendly and business letters, filling out business forms, simple news items, and recording such school work as quotations, outlines, references, and dictation.

The language process. Before suggesting ways of developing accuracy, force, and charm in the expression of language, we will turn to a consideration of the language process. Suppose you witness an automobile accident. The chief particulars, such as the rushing cars, the crash, the gathering crowd, and the appearance of the persons injured, make a deep impression upon you. This impression is made directly by the elements in the situation; in other words, it may be said that the stimulus is direct. Suppose you relate the occurrence to a friend. You do not have at hand the same situation which affected you. Instead, you are compelled to depend upon *signs* or *symbols*, that is to say, upon spoken words. You endeavor to convey to your friend by words what you obtained through objects, activity, and their relations to one another. These words are not real stimulus-situations, but are substitutes for them. They owe their effectiveness to their connections with previous real experiences, the memory of which your nervous system has retained. If your friend had never seen an automobile, an accident, a crowd, a busy street, or an injured person, it would be impossible to convey the situation to him by words in such a way that he would understand it. Nor would it help him any to go to the dictionary and find the definitions of the words *automobile*, *accident*, *crowd*, and *injured*.

This reveals a basic principle that must be borne in mind in the teaching of language. It is to the effect that language teaching is effective to the extent that it is connected with the real life experiences of the persons being taught. Without this connection, language teaching is merely word teaching, and is no more educational than teaching cuneiform inscriptions would be. Word teaching may give the pupil a certain deceiving glibness in expression without giving him any more real conception of the meanings of the words

than a parrot would have. Words that are learned apart from the objects and situations which give them meaning are much like paper money that is not redeemable in gold or silver; they are useless counters. The difference between extending experiences and then giving the word symbol for them, and teaching by symbols only, is illustrated by the following story:

At a county institute a teacher on the platform was demonstrating how to teach the words *transparent* and *opaque* to a little class of pupils. She put some clear water in a glass and held it out before the children. They could see her hand through the glass and the water. She held a book on the side of the glass away from the pupils. They could see it. Then she held up a thin sheet of celluloid. They could see through that also. She next told them that the glass, the water, and the celluloid were transparent, and had them name other things that are transparent, such as window glass, isinglass. Her next action was to pour some ink into the glass of water and again hold the glass before them. They could not see through the glass and the water. For the celluloid she substituted a thick piece of pasteboard. They could not see through it. She told them that the inky water and the pasteboard were opaque, whereupon they named other opaque substances, such as wood, cloth, brick, and stone.

This process had taken more than ten minutes. When the teacher asked for criticisms of her method, another teacher stood and said, "I can teach those words in half the time you did." Being asked to give a demonstration, she came forward, watch in hand. Pointing at one of the children she said, "I want you to find the meaning of the words *transparent* and *opaque* in that dictionary, and I will give you just five minutes to do it." In less than the time allowed the child had the definitions, and the critic, turning to

the demonstrator, proudly said, "That is the way I teach." The first teacher believed in extending experiences and then giving words; the second believed in word teaching. Only the first was real language instruction.

Realizing language aims. The experiences which are used in developing language ability must of course be worthwhile experiences. If they are forced and artificial the language will be of the same type — bookish, dull, and general — in fact, entirely as bad as word learning. If everyday experiences and immediate needs are taken as a basis for language work, the instruction will be related to such lines of action as the following:

1. Daily school work in all subjects
2. Social affairs in school and out
3. Simple business affairs
4. Recreation and enjoyment
5. Mastery of tools, such as those of the library, dictionary, charts, and graphs
6. Citizenship activities

The actual training program or language activities will be very well covered under four main heads:

1. Development of a sentence sense and sentence relations
2. Enlargement of the vocabulary
3. Correction of language errors
4. Practice in composition technique

1. Development of a sentence sense. The sovereign advice is that the pupil shall early form the habit of speaking and writing in complete sentences. This is what is meant by the development of the sentence sense. The sentence is the basic unit in all language work; as soon as it is thoroughly mastered good English easily follows. Sentence making, when really based upon experience, is equivalent to thinking. It begins with a connection between a

situation and a response. It passes next to a connection between a situation and a symbol which stands for the situation. Another process of the same type is gone through with: situation-symbol. The first combination is next related to the second and stated in written or oral form. The result is a sentence.

This can be illustrated by analyzing the sentence, *The clock strikes.* Here the first situation is an object and the response an idea of form, size, and materials. The next connection made for the object is with the symbol *clock*, or an object-symbol connection. The next situation is an activity, which is finally connected with the symbol *strikes*, an activity-symbol connection. When the object-symbol connection is related to the activity-symbol connection, it gives the sentence, *The clock strikes*, and the mental process may be called judging, which is an elementary form of thinking.

This shows very well the different steps which must be taken in the practice of making complete sentences. The first is to form the connection between an object situation and its name; the second to form the connection between an activity situation and its name; and the third to relate the two. The first connection gives the subject of the sentence, the second its predicate. Needless to say, any modifiers or completing terms must also be connected first with their symbols and then with the subject and predicate ideas and symbols. An expression with a subject only indicates either that the pupil has no predicate formed in his mind, or else that it has not been connected with the expressed subject. Instead of using this method of connecting experiences, some teachers depend on a study of grammar for securing complete thoughts; others rely upon the imitation of models of spoken and written sentences. Neither grammar nor imitation is adequate. Technical grammar

may be looked upon more as a tool for the teacher than an aid to the pupil; like models, it is useful as a check, but it does not establish the basic connections in the first place.

Steps in developing the sentence-sense rationally are given here:

1. Some object, process, activity, or event is selected, and the children are told to find out everything they can about it. In order that individual differences may be cared for, they are permitted to choose among several situations.
2. Suppose the situation, or object, "glass" is chosen, the pupils find out what they can about it. They may study
   a. Its form and qualities: hard, transparent, brittle; in some respects like water, diamond, ice.
   b. Its uses and forms: in windows, lamps, dishes, ornaments, etc.
   c. The process of manufacture:
      1. In ancient days.
      2. In modern times.
   d. Trade and commerce in it.

The finding out about the object consists in learning what it is and does; how it is made, how obtained; what forms it takes; what people have thought about it, and how they feel about it. Connections are next made between the object and what it is and does. These connections when expressed are sentences. If they are written, attention should be called to the necessity of using capital letters and end marks to separate one sentence or thought from others. The sentences on one subject — say form and qualities of glass — are collected in one division into a paragraph or related paragraphs. One sentence in each paragraph should be formed to tell what the other sentences are about: i.e., the topic sentence. Practice brings complete sentences, all organized into unified paragraphs. Let us outline the composition that results, writing a topic sentence for four paragraphs based on the foregoing study of glass:

1. Glass is a very interesting product. (Followed by sentences giving facts about its form and qualities.)
2. It is used in many ways. (Sentences that enumerate or illustrate uses.)
3. The process of manufacture is simple. (Sentences that give the steps of the process in order.)
4. Glass enters largely into the commerce of the country. (Sentences that show its value there.)

2. Enlargement of the vocabulary. Children acquire their first words by connecting objects, activities, and qualities with their names. Thus pupils learn to associate the words *house*, *build*, and *white* with their respective meanings, by some one pointing out the object and saying "house," and the act of building and saying "build," and so on. Since the connecting centers for reading, hearing, speaking, and writing are localized in different brain areas, the four vocabularies connected with the activities are not necessarily the same. The reading vocabulary, with the upper-grade pupils, is far more extensive than any of the other vocabularies. This is probably due to the fact that the reading situation demands more words than the others. It may be because through reading the pupils have a better chance to get the meaning from the context than through any of the other processes.

It should be the policy to teach the various new words as they are needed. The need will arise in trying to understand the word and express its meaning. If it is a word occurring in the readers or in some other textbook, the best recommendation is the use of the dictionary, a book of synonyms, or the encyclopædia. Beginning with the fourth grade, it is said, children should be drilled in how to find words in the dictionary and how to pronounce them correctly. A good plan to stimulate practice is to write a list of words on the board, and then divide the pupils into two "teams." At the signal "Go," they set to work to see who will be first to

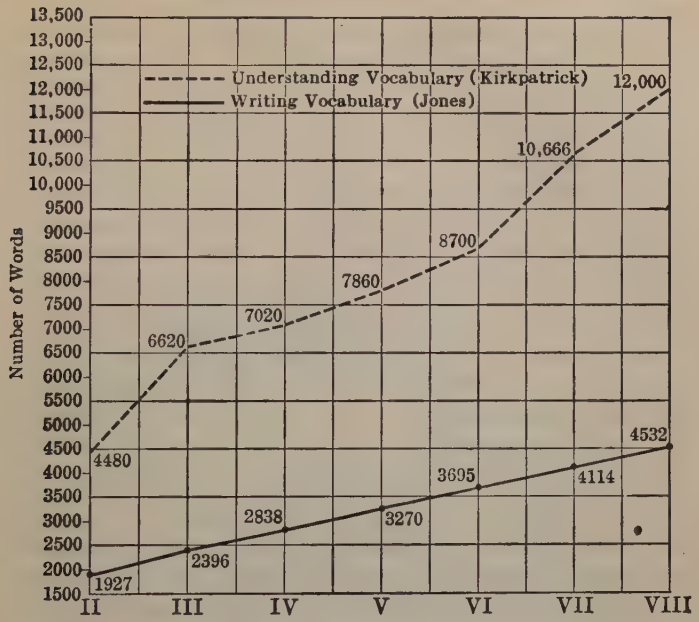


FIG. 14. WRITING AND UNDERSTANDING VOCABULARIES OF ELEMENTARY SCHOOL PUPILS COMPARED

(Based on studies of Kilpatrick and Jones)

find the word, who second, and who third. Three points are given to the first, two to the second, and one to the third. The contest may be continued by having the sides take turns in pronouncing words, with three points received for each word correctly pronounced, and points forfeited for every word missed. The next step in dictionary work is finding the definitions of new words as they occur in the texts and then fitting these definitions into the sentences, in each case choosing the best for the purpose. After the pupils learn how to use the dictionary, they should be expected to use it as often as the need arises.[1]

[1] The mere giving of a dictionary definition does not guarantee that the

3. Correction of errors. The child brings to school the language he has heard in the home and the community. Sometimes it is good, but more often it is bad. This persistence of early habits and continued impression made on the mind by incorrect forms complicates the language problem and makes necessary systematic and intensive drill in the correct forms. Sometimes children hesitate to use correct forms outside of school for fear they will be laughed at by their associates; they do not want to appear "different." In preparing for a campaign for better speech it is wise to build up social standards under which those pupils who use correct language will receive approval and those who do not will suffer disapproval.

Lists of errors may be obtained from two sources: (1) the errors made by the pupils, and (2) the published results of error studies. With lists of errors at hand, the teacher proceeds *to teach the correct forms*. When a child makes one of the errors, she points it out to him and gives him the correct form. Drill is provided in this way according to the needs of each individual. The drive on errors described in Chapter XIX, in connection with Better-English Week, is a good way to begin the campaign for their elimination. The results of error studies shown in Table XI will prove useful to the teacher.

Speech defects. Allied to language-form errors are the various types of speech defects. These are almost always serious. Other children laugh at the defective speaker and

pupil really knows the word, as many amusing incidents show. These stories have been recently going the rounds:

A school girl paraphrased the line, "To bicker down the valley," from Tennyson's poem, *The Brook*, as follows: "To have an undignified quarrel in a low place among the hills."

Another girl changed the line from *Lochinvar*, "He stayed not for brake," to, "He never stopt for a mechanical contrivance to reduce speed by means of friction."

TABLE XI. MOST FREQUENT ERRORS IN SPEECH

(Pittsburgh, Kansas City, Detroit, and Hibbing. Adapted from *Third Yearbook*, Department of Superintendence, p. 281)

TYPES OF ERRORS	CITIES — PER CENT			
	Pittsburgh	Kansas City	Detroit	Hibbing
Wrong verb	18	12	18	20
Syntactical redundance	16	10	15	21
Confusion of past tense and past participle	14	24	14	8
Non-agreement of verb with subject: person — number	13	14	12	8
Double negatives	10	11	9	8
Wrong tense form	5	5	3	5
Confusion of past and present tenses of verbs	3	2	12	7
Subject of verb not in nominative case	3	4	4	3
Wrong pronunciation and enunciation	3	0	0	0
Confusion of demonstrative adjective and pronoun	2	3	3	2
Wrong form of pronoun	2	2	2	3
First personal pronoun standing first in series	2	2	1	2
Predicate nominative not in nominative case	2	2	1	1
Confusion of adjectives and adverbs	2	4	2	2
Confusion of prepositions	2	0	0	0
Objects not in objective case	1	1	1	1
Pronoun not in agreement with antecedent	1	0	1	1
Confusion of comparative and superlative	1	1	1	1
Adverb instead of negative form of verb	0	0	0	2
Miscellaneous	0	0	0	2
Misplaced modifiers	0	0	0	1
Wrong part of speech due to similarity of sound	0	1	1	0
Words omitted	0	0	0	1
Total number of errors studied	25,676	5883	11,207	10,190

tantalize him. He loses confidence in himself and his personality is weakened. Often, rather than be ridiculed, he refuses to recite. He does not make good grades, and as a result of his class experiences may be seriously handicapped for life. The first step in a constructive program is to protect the child from ridicule. The teacher may have to put the case before the other children and ask for their support. She should consult with the parents and obtain their cooperation. If the case is one that will not be aided by school exercises, she should advise special treatment under an expert; if this is not possible, perhaps the next best thing to do is to relieve the pupil from any oral work that subjects him to embarrassment, and let him center his attention on written exercises.

The leading types of speech defects may be classified under four headings. They are:

1. Defects due to bad examples, for example, baby talk.
2. Defects due to malformations or improper adjustment of the speech organs, such as lisping, tongue-tie.
3. Defects due to nervous troubles, such as stammering.
4. Defects due to the effects of other languages — a foreign accent, for example.

The nature of the defect is often easy to ascertain. The first step in making the diagnosis should be an examination of the child's tongue, teeth, palate, nose, and throat for the purpose of finding out whether they are normal. An abnormally high or cleft palate, irregular teeth, a large unwieldy or tied tongue, adenoids or other obstructions in the nose, a short or cleft upper lip, and nervous throat movements mean defects in speech. Where dental treatment or operations will correct the defects, they should be recommended to the parent. The second step is to find out what sounds and combinations of sounds are the most difficult. To do this, make up a list of words that begin with consonants and the consonant combinations *th*, *sh*, *ng*, *br*, *gr*, *tr*, *ch*, *ph*, *pl*, *sl*, and *st*, three words for each. Put these on a card or chart and have the child pronounce them, marking any that he cannot speak clearly. Third, drill the child on the difficult terms, taking care to see that the tongue, lips, and teeth are in the right relations to one another. The method is for the teacher to pronounce the term and the child to imitate her pronunciation. Individual charts should be made up for the child's use at home or under the coaching of another pupil.

If baby-talk is the source of the error, the only thing to do is to point out the mistakes to the child and get him to substitute the correct forms. Defects resulting from irregular teeth and from a short upper lip may be overcome by

practice with the speech organs properly placed. An unwieldy tongue may be controlled in the same way. Lispers should be drilled on combinations containing *s*, *z*, *sh*, and *zh*. The basic condition for stammering is nervous instability, undue emotionality, malnutrition, or physical weakness from any cause. It is made a habit through the careless placing of the speech organs, haste in speaking, forced breathing while speaking, imitation of stammering, word teaching, and mental conflicts. These mental conflicts may be due to teasing, bullying, a forced shifting from left-handedness to right-handedness; ridicule of personal appearance, fright, shock, over-excitement for any reason, and similar causes. The proper treatment includes:

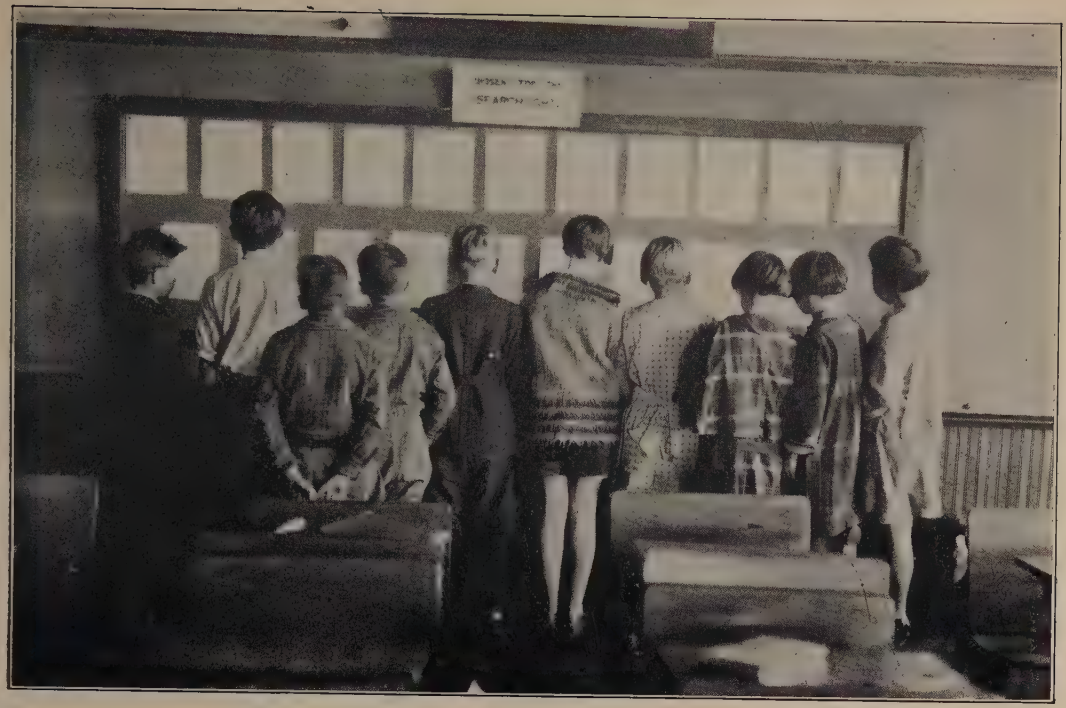
1. Building up the physical tone of the body: good food, sleep, rest, removal of worries, happy play
2. Removal of the causes of the defect
3. Development in the child of confidence and of a determination to improve
4. Reëducation of the speech center by means of new habits, new words, new interests, and slow, deliberate, and thoughtful practice
5. Training the child to give attention to self-control, and to think before speaking
6. Constant encouragement of the child and renewed motivation

4. Practice in composition. Language instruction should begin with oral composition, and this generally should precede all formal written composition. In the first grade there is no preparation in advance, no announcing a recitation in language. The pupils tell what they have seen and heard and done, and the teacher praises and encourages, makes simple corrections, and suggests topics, organization, and words. From conversations the class should progress to story-telling, informational reports, and discussions of current child affairs and problems. Dramatization natu-

rally follows, and then in order club meetings, talks, and sentence drills. From the third grade up, clubs supply an excellent motive for oral language. An outdoor club can talk about bees, butterflies, flowers, birds, and animals. A story club can tell and discuss stories from literature and history. A work-and-play club can take for their topics games, tools, ways of making things, products, and industries.

Written composition may well begin with the copying of sentences which the pupils have given in the oral-composition period. From the start these should be so grouped that they tell a story or give information. Next in order is dictation, the pupils taking turns in giving sentences of their own composition, the teacher confining herself to names, dates, titles, and interesting sentences from local materials — signs, slogans, directions, and news. The next stage should include the reproduction of stories and friendly letters. With the fourth grade, pupils should be introduced to all the forms of written composition ordinarily used: advertisements, business letters, news items, business forms, reports, and stories.

Motivation of composition. The teacher is one of the most potent forces in motivating expression. She should remember that sharp and sarcastic criticisms suppress language activity and destroy that natural and spontaneous expression which makes for charm and force. The occurrence of a few errors in the pupils' language is not so bad as dislike of, or indifference to, composition. Good-nature, enthusiasm, and vivacity should characterize the language periods; they should not be connected with anything unpleasant. Praise should be generously bestowed. If an oral error is made, the teacher should suggest, at the appropriate time, "It is better to say ——," giving the right form. The only marks placed on written compositions



THE BULLETIN BOARD MAKES FOR INTEREST IN LANGUAGE WORK

Sixth-grade pupils inspecting their compositions, chosen for publication in the school magazine

TABLE XII

MOST FREQUENT ERRORS IN WRITING SOCIAL AND BUSINESS LETTERS

Adapted from *Third Yearbook*, Department of Superintendence, p. 295

TYPES OF ERRORS	SOCIAL LETTERS		BUSINESS LETTERS	
	Number	Rank	Number	Rank
Punctuation	899	1	2242	1
Sentence structure	517	2	263	4
Spelling	308	3	242	5
Adjectives and adverbs	269	4	28	11
Letter form	223	5	402	2
Capitalization	131	6	273	3
Diction	97	7	56	8
Apostrophe	88	8	80	7
Careless writing	61	9	53	9
Verbs	59	10	222	6
Prepositions and conjunctions	47	11	47	10
Case	25	12	7	14
Pronouns	22	13	9	13
Quotation marks	9	14	10	12
Total number of errors	2745		3934	

should be marks of approval. The errors in the compositions may be listed for correction and drill, but there is no justification for marking up the paper with red-ink checks, interlinings, and corrections of misspelled words.

Publishing is another effective method of stimulating interest. This is not difficult to provide for. If there is a local paper, make arrangements for the printing of a children's corner or a school column once a week. If the school has a mimeograph, that will serve even better than the local paper. In a certain three-room school a staff gets out on a typewriter a weekly issue of school news. If none of these methods are available, the bulletin board can be made into a most excellent daily paper. A committee is appointed, and compositions written by the pupils are handed to the chairman. The committee selects the best and posts them.

Frequently it makes suggestions for the improvement of rejected manuscripts, and later on the revised work is "published." This plan encourages good form and accuracy in papers in arithmetic, spelling, and all other subjects, for in this kind of publication everything can find a place. Local or school materials may be varied occasionally by clippings from newspapers and magazines. A bulletin board used in this way is a never-failing source of interest to the pupils and a strong motive for composition.

There are any number of social organizations and activities which can be used to motivate language. Among them may be mentioned:

1. Programs for special days (see Chapter XXIII)
2. Campaigns and drives — Better-English Week
3. Better-speech club
4. Writers' club
5. Discussion club
6. Language games
7. Contests in vocabulary, poetry, essay, correctness

Most vital of all is the motivation which comes from basing language activities on social situations. It is not necessary to go to literature or to encyclopædias and reference books for ideas; they are to be found in life all around. They not only accentuate the children's interest but give them good training in meaningful affairs. The following is a partial list of the range of situations upon which language work may be based:

1. Telephone conversations — dramatization
2. Introductions
3. Apologies
4. Regrets
5. Presentation of gifts
6. Interviews
7. Greetings, such as good-morning, good-afternoon
8. Parliamentary rules in meetings

9. Introduction of speakers
10. Story-telling
11. Society news — items on weddings, parties, receptions, travel, visitors
12. Sports, games, contests
13. School news about activities, visitors, enrollment
14. Asking and giving directions
15. Business letters — orders, bills, complaints, answers to advertising
16 Lost and found notices
17 Conversation — calls, dinners, parties, clubs
18 General news
19. Citizenship items — health, safety, voting, thrift
20. Entertainment — stories, readings, essays, speeches

A lesson plan. This lesson plan will illustrate how one may teach oral English to a fourth- or fifth-grade class:[1]

UNIT OF INSTRUCTION: One-minute talks on any topic in which the children are interested.

TYPE OF LESSON: Oral expression with constructive suggestions.

TEACHER'S AIM: To encourage spontaneous expression, and to aid children to discover ways and means of expressing themselves better and more easily.

a. To overcome timidity in the children
b. To enlarge their vocabulary
c. To correct incorrect expression
d. To correct voice faults

PUPILS' AIM: To improve their speaking ability

APPROACH:

a. Informal discussion of what is necessary for a good speaker
b. Informal discussion as to what would be good topics
c. Informal discussion of some of these topics. (This makes for ease and facility when the pupils appear before the group in a more formal manner.)

SUMMARY: We have discussed the things that are necessary for a good speaker. You have told me that they are a good position, a good voice, and good ideas. You have also told me what you think are good topics to talk about. I am anxious to hear what

[1] Prepared by Velma Randall, Stanford University.

you have to say, and how well you can say it. Who will be first to talk to all of us on some interesting subject?

PROCEDURE:

a. Praise those who have volunteered, and choose one of them who you believe will make a creditable showing.
b. Let the child give the talk without interruption, unless he needs help. If he does need help, encourage him by supplying words, asking questions, and offering hints.
c. When he has finished, praise him, and suggest how he can tell more about the same topic another time.
d. Call upon other pupils who have volunteered. As they go along make a note of their errors in pronunciation, position, choice of words, etc.
e. Do not subject any one to criticism at this time. A few helpful suggestions may be made, such as: "Johnny, your story would have been *even* better if you had spoken a little bit louder. Remember that for the next time."
f. Do not call until a later time upon a pupil who says, "I can't," give him a few days in which to get into the right frame of mind.

CLOSE OF LESSON: Congratulate the class on the beginning made. Say that those who did not recite may do so later.

The use of grammar. At one time language instruction was based upon grammar; there are still many schools in which this is the method. With the development of the psychology of learning, there has come to be a grave doubt as to whether the teaching of grammar helps in the development of accuracy, force, and charm in language. Grammar as it is traditionally taught is a form of logic, derived chiefly from the outgrown faculty psychology. It has not yet been completely revised in the light of new knowledge of human behavior. It lends itself readily to word teaching, and the facility that pupils show in repeating conjugations, giving rules, and analyzing sentences gives a false notion of their actual understanding of the science. It is therefore advisable to postpone the teaching of formal grammar as long as possible; and such teaching as is done in the elementary

school should be confined to simple elements which are directly related to immediate use.

In some schools, however, the teacher has no choice. The school authorities believe that grammar trains the mind, makes for clear and effective expression, and prevents errors in language. They believe it is good because they had it at school themselves — or they hold to some similar delusion. The high-school teachers of Latin may insist upon it as support for their subject. County and state examinations in grammar may have to be passed. In any one of these situations, the teacher should accept the inevitable calmly. She should free the lower grades for language development, not taking up grammar before the seventh grade. She should then teach it only in explaining correct usage. If formal grammar is required, a period of three or four months may be set aside in the eighth grade for its study. Although everything should be done to make the subject agreeable — games, contests, encouragement, progress charts — doubtless the most effective results will be obtained by using the method that certain boys in *Tom Brown's School Days* used in studying Latin, that is, the method of dogged persistence. This means much memorizing and much drill. Aside from the material on errors (see page 281), the barest essentials in this study are as follows:

1. Simple, complex, and compound sentences, with their punctuation
2. The distinction between restrictive and non-restrictive clauses, with attention to their punctuation
3. Infinitives to the extent of avoiding the use of the split infinitive, the confusion of past tense and past participle, and to being able to show that the genitive form is used with the gerund
4. The genitive case of nouns, learning the use of the apostrophe and that some genitives signify relation — that not all are possessives
5. Simple treatment of appositives, noting punctuation

6. Identification of proper nouns and adjectives, with capitalization
7. Declension of pronouns memorized and practiced in sentences, oral and written
8. Agreement of pronouns with antecedents
9. Comparison of adjectives
10. Conjugation of verbs, with emphasis upon the present and past
11. Practice in the use of such verb forms as was and were, saw and seen, may and can, did and done, is and are, come and came, lie and lay, went and gone, give and gave

Tests and standards. Tests and standards are not available in teaching oral language. The teacher may indicate desirable practices by posting a list of suggestions: clear enunciation, correct pronunciation, proper breathing, good attention, correct form, avoidance of slang, and the personal attitude that is so closely related to charm in speech. Local standards in written composition can be built up by selecting and posting the best work in any class, and by systematically eliminating errors. There are many composition scales available, and several tests of language ability, covering the choice and meaning of words, and also punctuation, grammar, sentence sense, and common errors.

Informal tests in language are not difficult to make. All the forms described in Chapter VII are applicable. In addition, a brief description of other devices is given below:

1. *Word-meaning tests:* The teacher prepares a list of words and has the pupils write synonyms, opposites for them, and define them in terms of use or relation.
2. *Directions:* The teacher writes simple directions, the pupils perform them.
3. *Associations:* The pupils give word responses to words named or written by the teacher. This test should be timed, a good rule being to have as many words as possible written in ten seconds. A word that has no meaning or that has the same sound as another word is counted as wrong.

4. *Comprehension:* The pupils answer questions based upon a story which they have been told, or which they have read.
5. *Memory:* The pupils repeat material assigned for memorizing, such as definitions, declensions, and conjugations.
6. *Completion:* The pupils fill out blanks.
7. *Recognition:* Picking out nouns, verbs, pronouns; checking mistakes in spelling and composition; identifying subject and predicate.

Summary. Language is concerned with the expression of thought, and is of two types, oral and written. The social need is largely for oral language, which in the elementary school should occupy more attention than written language. The learning process consists in making connections between situations and symbols, and meanings are dependent upon actual experience. Mere word learning of the parrot type is to be avoided. The methods should be directed toward developing a sentence sense, enlarging the vocabulary, correcting errors, and giving practice in composition. Attention should be given in the language class to the correction of speech defects, such as lisping, baby talk, stammering, and a foreign accent. Language learning may be motivated by the constructive attitude of the teacher, by publishing, by social organization, and by basing activities on social situations. Grammar study should be reduced to the minimum essentials and grammar should be taught only in relation to its use.

EXERCISES AND PROBLEMS

1. Give as many reasons as you can to show that language is the most fundamental of all elementary-school subjects.
2. Trace the process of learning a new word, or of writing a sentence, in terms of stimulus, response, and connection.
3. What is meant by word learning? Illustrate.
4. Give arguments for and against the use of language games.
5. The lack of sentence-sense results in the omission of subject or predicate, and in loosely connected and "run on" sentences where the

thought is not unified and clear. Devise some exercises for developing the sentence sense.

6. Why is there a tendency to neglect oral composition in school work?
7. Outline a plan for eliminating language errors that will fit in with the Better-English-Week program.
8. What criticisms can you advance against the theory that children should be sent to look up in the dictionary all the words in their lessons which they do not know? How would you supplement dictionary definitions?
9. What procedure would you follow in collecting language errors of the pupils under your instruction? How would you eliminate the errors?
10. Prepare a chart of words, sounds, and sentences that can be used in detecting and eliminating speech defects.
11. Prepare a lesson plan in which the purpose is to teach the correct use of certain words: do and does, good and well, etc.

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CHAPTER XVI

TEACHING SPELLING AND PENMANSHIP

Relation to language. Spelling and penmanship are both important factors in written composition. Strictly speaking, spelling is a simple form of stimulus-response learning, like counting or saying the alphabet; the order of the letters in a word is fixed, and the child has only to memorize the letters in the given order. In reality, however, spelling consists of more than memorizing the letters in words; it includes such language activities as word meaning, pronunciation, and the use of words in sentences. These last three activities by right should precede spelling proper, whether they are taught separately in the language periods or are taught in the time allotted to spelling. In this discussion, attention will be given principally to writing the letters in the correct order.

Penmanship is the representation of ideas by conventional signs. It must necessarily be accompanied by correct spelling in practical life; we do not spell without writing, nor can we write without spelling. Writing is the motor expression of a mental act. It is entirely probable that a person's inability to spell the words that he needs affects the ease, rate, and legibility of his penmanship. The object should be to teach the order of letters in useful words so perfectly, and to insure such skill in the execution of signs, that the writing will be smooth and regular. The steps in the process may be reduced to three: (1) connecting the letters of the word in order, (2) connecting the proper letters with the movement of writing the word, and (3) practicing (1) and (2) simultan-

eously until they are reduced to habit. In the first two situations, we have to decide what to teach and how to teach it; in the third the usual laws of drill apply.

I. SPELLING

What to teach in spelling. It should be the aim in spelling to teach the words that are commonly needed in the writing vocabulary. This is a great change from the customs of twenty-five, even fifteen years ago, when the idea was to teach all the ten to fifteen thousand words in the older type of spellers, or when people took pride in spelling the dictionary from cover to cover. Great economy has been effected and teaching has been greatly simplified by finding out what words are required to be written in the conduct of everyday affairs. It has been found that fifty different words account for half the total number used in family correspondence, and eight hundred words account for nine tenths of the total. Ordinary needs in writing can be met with as few as one thousand words; a writing vocabulary of four thousand words is adequate for almost every purpose, while half that number is enough to teach directly in the elementary school.

Several lists of commonly used words have been made. Ayres prepared a list of one thousand words by combining different studies. Thorndike has published a word book containing the ten thousand words that are most commonly used in written language. Horn has also devised a list of ten thousand words that are ordinarily used in business communications, personal letters, minutes, resolutions, reports, excuses written by parents, and the vocabulary of a single individual. Many other studies have been made, so that the modern spelling book can be trusted to contain words that are needed by all. It is sometimes necessary to supplement general lists by words of local importance, such

as names of people, places, and things. Unusual words should not be memorized at all; if they are needed, the pupils may go to the dictionary for them, or they may be written on the board. The Ayres list is given here, with the words arranged in order from the easiest to the most difficult, and by grades. The list can be used for teaching and testing, the percentages above the columns giving the standards for each grade.

The most difficult words. Ease in learning words is dependent upon four main factors in the words: (1) phonetic character, (2) configuration or form, (3) meaningfulness; and (4) concreteness. Inversely, words that lack pronounced characteristics of these types are difficult. The length of a word, of course, has something to do with the ease or difficulty with which it is learned, but it cannot be said of all words that the longer they are the more difficult they are. Doubtless one reason why phonetic words are easier to spell than others is because so much emphasis has been placed on oral spelling. From the point of view of visual learning, there seems to be no reason why *eight* is not as easy to spell as *slope*. Learning is facilitated apparently by double vowels and consonants, as in *sleep* and *little*. Most important of all are association and concreteness. Such words as *mother*, *home*, *baby*, *table*, *doll*, and *dress* are easier to spell than such words as *truth*, *are*, *this*, *about*, *four*, *seems*, and *truly*. Children have had experience with what the first words stand for; those in the second group are abstract and, to the child's mind, largely meaningless. The difficulty of the famous *Hundred Demons* is explainable in the terms that are here given. This list, devised by Professor Jones, should be mastered by every pupil by the end of the elementary-school period. It comprises:

TABLE XIII. THE HUNDRED SPELLING DEMONS OF THE ENGLISH LANGUAGE

which	heard	ready	choose	very
their	does	forty	tired	none
there	once	hour	grammar	week
separate	would	trouble	minute	often
don't	since	among	any	whole
meant	can't	busy	much	won't
friend	sure	built	beginning	cough
business	loose	color	blue	piece
many	lose	making	though	raise
some	Wednesday	dear	coming	ache
been	country	guess	early	read
used	February	says	instead	said
always	know	having	easy	hoarse
where	could	just	every	shoes
women	seems	doctor	through	to-night
done	Tuesday	whether	they	wrote
hear	wear	believe	half	enough
here	answer	knew	break	truly
write	two	laid	buy	straight
writing	too	tear	again	sugar

It saves time to test pupils before making spelling assignments. In other words, there is no purpose in having pupils study words that they can already spell. Some estimate that seventy-five per cent of spelling time is wasted over words that children already know. At weekly intervals, or longer, the children should write, from dictation and without any preparation, the words that would ordinarily be assigned for study. The words that all spell can be glanced over rapidly; the words that none spell should be marked for careful study. In addition, each pupil will have words which are new or difficult for him. The number of words to teach each day depends upon what words are taught, and their difficulty. If meaning, pronunciation, and use are taught as a regular part of the spelling lesson, fewer words can be taught than if the correct order of letters is the only

aim. In the first three or four grades, two to five new words a day, with five to ten review words twice a week, is a fair load. The amount can be doubled for the upper grades. Formal spelling should not begin until at least the beginning of the second year — still better, of the third.

How to teach spelling. After finding out what words the children need to learn, the next step is to direct the study. When once the study process is learned, the duty of the teacher is to motivate, look after individual needs, make supplementary assignments for the better pupils, and see that the study directions are followed. Assuming that the pupils know what the words mean and how to use them, the method would be as follows:

1. The teacher pronounces the words slowly and distinctly.
2. The pupils pronounce the words in concert, or individually.
3. The teacher indicates on the board the difficult part of any word by underlining it or writing it in colored chalk or in larger letters.
4. The pupils look closely at each letter and syllable, and spell the word silently.
5. Without looking at the word, they try to recall the spelling.
6. They check their spelling against the word and study a second time, then recall as before.
7. They write the word without looking at the book, and check for correctness.
8. This process is continued for two or three times, until the pupils believe that the word is learned, when they pass to the next one.
9. After studying the whole lesson in this way, they repeat once the silent spelling and writing.
10. If any words are missed on the review, they are marked for further study.

A lesson plan. The lesson plan which follows was prepared and used successfully in teaching spelling by a beginning teacher:

UNIT OF INSTRUCTION

Spelling words: *lightning, striking, kindle, learned, fuel.*

TEACHER'S AIM: To enlarge the written and spoken vocabulary, to focus attention on the difficult parts of a word, and to develop pride in correct spelling; more specifically, to make lightning, striking, kindle, learned, and fuel a part of the pupil's writing and speaking vocabulary.

PUPIL'S AIM: To learn the words so that he can use them in written composition.

APPROACH: Yesterday we read a story about fire. It told us that the first fire used by man was probably started by lightning's striking a dead tree and setting it on fire. That may have been a million years ago. For many years after, man depended upon nature to start his fires. After a time he learned that by adding more fuel he could keep the fire burning continuously and make fire his servant. This whole story is so interesting that I thought you might want to write it in your own words for the language class. Those stories which contain no misspelled words will be posted on the bulletin board. Here are a few of the words which were used in the story. (Writes them on the board.) Do you think we shall need them when we write?

What do you think we had better do before the words are erased? (Learn to spell them.)

Model 1. Listen while I pronounce and spell the word *lightning.*

Imitation 1. Pronounce and spell this word slowly.

Suggestion 1. Let us pronounce it again, and see if there are any letters we can see but not hear (*gh*). That is the part which is hard to spell. Let us underline these letters. (Put line under *gh.*)

Suggestion 2. Is there any part of this word which is hard to say? (*g*) Let us also underline the last *g* so that we shall not forget to sound it. (Put line under final *g.*)

Repetition 1. Let us spell and pronounce again. (Individual children also spell and pronounce the word.) Close your eyes and spell *lightning.* Open your eyes and write it in the air. Mary, go to the board and write it.

Note: In like manner present and drill upon each of the remaining words. First test the effectiveness of the practice by having the words written in a column; next by

having the pupils write their stories. Select all stories having no misspelled words and post them on the bulletin board.

Spelling drill. The meaning of words will be better understood if they are first presented in easy sentences. This plan gives more assurance that the meaning will be known before study for spelling purposes begins. Drill, however, may be not with use in sentences, but by what is known as column spelling. Like the original learning, this drill should be in written form, though oral spelling is good to give for pronunciation and as an aid in remembering. Knowledge of form is more important, though, than knowledge of sound, and it is a sign of bad learning methods for a pupil to have to stop writing till he sounds out a word. Attentive repetition is what gives results. Pupils should not be required to write a word a given number of times, say ten or twenty. Successive drills may be made shorter and spaced farther and farther apart, until finally the word is dropped altogether. Drill ought to be on the words that the children have had difficulty in spelling; it will therefore be individual, for each pupil will have his own special list of "demons."

Motivating spelling. Spelling is an easy subject to motivate. The motivating may be done by showing the pupil that spelling is an important vocational subject. A person who misspells words finds difficulty in securing and holding a position. Knowing how to spell is important also from a social standpoint, for no one likes to receive a letter containing misspelled words. Socialized spelling, presented by means of games and contests, develops the children's interest. A spelling drive, undertaken for the purpose of seeing how long it will take a class to learn perfectly the hundred demons, or any other list, will carry over its interests for a long time. Certificates may be given for perfect

work, or for all who attained an A grade. This is one field in which nearly all pupils compete on a fairly equal basis, for a high degree of intelligence is not necessary for learning how to spell.

Spelling tests. The Ayres list of a thousand words may be used for testing, and ability may be located in terms of grades. The teacher could select twenty words from column O. If a pupil spelled fifteen of them correctly, his mark would be seventy-five per cent, and it would be proper to say that he showed fourth-grade spelling ability. If he spelled ninety per cent correctly, he would have sixth-grade ability, and so on. Or a scale may be made by taking one word from each column, the score being the number of words spelled correctly. If a more accurate measure of ability is desired the number of words should be increased. Thus in testing the fifth grade, one might take twenty to fifty words from each of columns O, P, and Q, the number spelled right being taken as the score. Fifty words is a good minimum; one hundred words are as many as there is time to score.

It has been found that pupils make a higher score when the words are dictated from columns than they make when the same words are given in sentences, the differences running as high as fifteen per cent. This suggests that the ability to spell words in columns is not the same thing as the ability to spell words under ordinary writing conditions. A truer measure of ability will therefore be obtained if short sentences containing the test words are prepared. The number of letters in each sentence should be counted, and the pupils given sufficient time to write when writing at their normal rate. The normal speed for each grade in letters per minute is as follows:

II	III	IV	V	VI	VII	VIII
36	48	56	65	72	80	90

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
SECOND GRADE → 99	98	96	94	92	88	84	79	73	66	58	50	← SECOND GRADE													
	THIRD GRADE → 100	99		98	96	94	92	88	84	79	73	66	58	50	← THIRD GRADE										
				FOURTH GRADE → 100		99	98	96	94	92	88	84	79	73	66	58	50	← FOURTH GRADE						
						FIFTH GRADE → 100		99	98	96	94	92	88	84	79	73	66	58	50	← FIFTH GRADE					
								SIXTH GRADE → 100		99	98	96	94	92	88	84	79	73	66	58	50	← SIXTH GRADE			
										SEVENTH GRADE → 100		99	98	96	94	92	88	84	79	73	66	58	50	← SEVENTH GRADE	
												EIGHTH GRADE → 100	99	98	96	94	92	88	84	79	73	66	58	50	← EIGHTH GRADE
me do	and go at en	a it is she can see run	the in so no now man ten bed top	he you will we an my up last not us am good little ago old bad red	of be but this all your out time may into him today look did like six boy book	by have are had over must make school street say come hand ring live kill late let big mother three land cold hot hat child ice play sea	day eat sit lot box belong door yes low soft stand yard bring tell five ball law ask just way get home much call long love then house year to I as send one has some if how her them other baby well about men for ran was that his led lay	nine face miss ride tree sick got north white spent foot blow block spring river plant cut song winter stone free lake page nice end fall feet went back away paper put each soon came Sunday show Monday yet find give new letter take Mr. after thing what than its very or thank dear west sold told best form far gave alike add	seven forget happy noon think sister cast card south deep inside blue post town stay grand outside dark band game boat rest east son help hard race cover fire age gold read fine cannot May line left ship train saw pay large near down why bill want girl part still place report never found side kind life here car word every under most made said work our more when from wind print air fill along lost name room hope same glad with mine	became brother rain keep start mail eye glass party upon two they would any could should city only where week first sent mile seem even without afternoon Friday hour wife state July head story open short lady reach better water round cost price become class horse care try move delay pound behind around burn camp bear clear clean spell poor finish hurt maybe across tonight tenth sir these club seen felt full fail set stamp light coming cent night pass shut easy	catch black warm unless clothing began able gone suit track watch dash fell fight buy stop walk grant soap news small war summer above express turn lesson half father anything table high talk June right date road March next indeed four herself power wish because world country meet another trip list people ever held church once own before know were dead leave early close flower nothing ground lead such many morning however mind shall alone order third push point within done body	trust extra dress beside teach happen begun collect file provide sight stood fix born goes hold drill army pretty stole income bought paid enter railroad unable ticket account driven real recover mountain steamer speak past might begin contract deal almost brought less event off true took again inform both heart month children build understand follow charge says member case while also return those office great Miss who died change wire few please picture money ready omit anyway	except aunt capture wrote else bridge offer suffer built center front rule carry chain death learn wonder tire pair check prove heard inspect itself always something write expect need thus woman young fair dollar evening plan broke feel sure least sorry press God teacher November subject April history cause study himself matter use thought person nor January mean vote court copy act been yesterday among question doctor hear size December dozen there tax number October reason fifth	eight afraid uncle rather comfort elect aboard jail shed retire refuse district restrain royal objection pleasure navy fourth population proper judge weather worth contain figure sudden forty instead throw personal everything rate chief perfect second slide farther duty intend company quite none knew remain direct appear liberty enough fact board September station attend between public friend during through police until madam truly whole address request raise August Tuesday struck getting don't Thursday	spend enjoy awful usual complaint auto vacation beautiful flight travel rapid repair trouble entrance importance carried loss fortune empire mayor wait beg degree prison engine visit guest department obtain family favor Mrs. husband amount human view election clerk though o'clock support does regard escape since which length destroy newspaper daughter answer reply oblige sail cities known several desire nearly	sometimes declare engage [illegible] terrible surprise period addition employ property select connection firm region convict private command debate crowd factory publish represent term section relative progress entire president [illegible] famous [illegible] estate remember either effort important due include running allow position field ledge claim primary result Saturday appoint information whom [illegible] themselves special [illegible] present action justice gentleman enclose await suppose wonderful direction forward although prompt attempt whose statement perhaps their imprison written arrange	forenoon lose combination avenue neighbor weigh [illegible] entertain salary visitor publication machine toward success drown adopt secure honor promise wreck prepare vessel busy prefer illustrate different object provision according already attention education director purpose common diamond together convention increase manner feature article service injure effect distribute general tomorrow consider against complete search treasure popular Christmas interest	often stopped motion theater improvement century total mention arrive supply assist difference examination particular affair course neither local marriage further serious doubt condition government opinion believe system possible piece certain witness investigate therefore too pleasant	guess circular argument volume organize summon official victim estimate accident invitation accept impossible concern associate automobile various decide entitle political national recent business refer minute ought absence conference Wednesday really celebration folks	meant earliest whether distinguish consideration colonies [illegible] relief occupy probably foreign expense responsible beginning application difficulty scene finally develop circumstance issue material suggest [illegible] senate receive respectfully agreement unfortunate majority elaborate citizen necessary divide	principal testimony discussion arrangement reference evidence experience session secretary association career height	organization emergency appreciate sincerely athletic extreme practical proceed cordially character separate February	immediate convenient receipt preliminary disappoint especially annual committee	decision principle	judgment recommend allege

All the words in each column are of approximately equal spelling difficulty. The steps in spelling difficulty from each column to the next are approximately equal steps. The numbers at the top indicate about what per cent of correct spellings may be expected among the children of the different grades. For example, if 20 words from column H are given as a spelling test it may be expected that the average score for an entire second grade spelling them will be about 79 per cent. For a third grade it should be about 92 per cent, for a fourth grade about 98 per cent, and for a fifth grade about 100 per cent.

The limits of the groups are as follows: 50 means from 46 through 54 per cent; 58 means from 55 through 62 per cent; 66 means from 63 through 69 per cent; 73 means from 70 through 76 per cent; 79 means from 77 through 81 per cent; 84 means from 82 through 86 per cent; 88 means from 87 through 90 per cent; 92 means from 91 through 93 per cent; 94 means 94 and 95 per cent; 96 means 96 and 97 per cent; while 98, 99 and 100 per cent are separate groups.

By means of these groupings a child's spelling ability may be located in terms of grades. Thus if a child were given a 20 word spelling test from the words of column O and spelled 15 words, or 75 per cent of them, correctly it would be proper to say that he showed fourth grade spelling ability. If he spelled correctly 17 words, or 85 per cent, he would show fifth grade ability, and so on.

Fig. 15. MEASURING SCALE FOR ABILITY IN SPELLING

Russell Sage Foundation, New York City
Division of Education
Leonard P. Ayres, Director

The data of this scale are computed from an aggregate of 1,400,000 spellings by 70,000 children in 84 cities throughout the country. The words are 1,000 in number and the list is the product of combining different studies with the object of identifying the 1,000 commonest words in English writing. Copies of this scale may be obtained for five cents apiece. Copies of the monograph describing the investigations which produced it may be obtained for 30 cents each, including the scale. Address the Russell Sage Foundation. Division of Education, 130 East 22d Street, New York City.

The directions given herewith should be observed in giving the timed-sentence test which follows. First read all the test slowly to the children. Next dictate each sentence.

TABLE XIV. A TIMED SPELLING TEST IN FIFTH GRADE

INITIAL SPELLING TEST — TIMED SENTENCES

TIME IN SECONDS	SENTENCES	NUMBER OF LETTERS
1. 27	He said, "I can *catch* the ball."	22
2. 24	The man wore a *black* hat.	19
3. 24	July has many *warm* days.	19
4. 26	Rain *began* to fall at noon.	21
5. 28	He wore a new *suit* of clothes.	23
6. 25	We *buy* bread at the store.	20
7. 23	Bad *news* travels fast.	18
8. 25	Warm days come in *summer*.	20
9. 24	The book is on the *table*.	19
10. 28	Many *people* live in the city.	23

FINAL SPELLING TEST — TIMED SENTENCES

TIME IN SECONDS	SENTENCES	NUMBER OF LETTERS
1. 30	*March* is the first spring month.	26
2. 26	He lost a small gold *watch*.	21
3. 27	The tree is *above* the water.	22
4. 27	We left *before* the sun rose.	22
5. 26	They live in a far *country*.	21
6. 27	Work begins in the *morning*.	22
7. 29	A pond is a small *body* of water.	24
8. 24	The old man lived *alone*.	19
9. 28	The pencil has a sharp *point*.	23
10. 26	The boys *know* where to go.	20

As soon as the time is up say "Stop," and dictate the next sentence. Count as misspelled any of the test words which are illegible, omitted, changed, or misspelled. Do not count off for poor writing or for failure to capitalize, unless the mistake happens to be in a test word. Do not count off for failure to punctuate, dot the *i*'s, and cross the *t*'s. The score is the number spelled right, and may be expressed in

percentages. To measure progress, one test should be given at the beginning of a term and another at the close. Two sentence tests are given here by way of illustration. They are timed for the fifth grade, with about ten seconds allowed for dictation. The words are selected from the Ayres list.

II. PENMANSHIP

What to teach in penmanship. Discussions of what to teach in penmanship deal with style and with materials. Style is usually associated with slant. In the extreme style, letters are written at an angle of fifty-two degrees from the vertical. In the old Spencerian form not only was the slant extreme, but the letters contained many loops and flourishes and the capitals were shaded. By leaving out these superfluous forms of ornamentation, extreme slant can be written with great speed, but it tends to lack the legibility of other styles. When speed is excessively stressed, slanted letters become angular and ugly, or fade off into indistinct, unreadable contours. The vertical system, in which the letters are at right angles to the base line, came in as a reaction to extreme slant. This system is easy to teach, and the letters are legible, but the rate is slow. When speed is urged, the result is a scrawly form of backhand which is harder to read than is the extreme slant. A slant between the two extremes gives, on the whole, better results and has come to be adopted as standard. Uniformity, rhythm, and legibility are depended upon for beauty, instead of flourishes and shading.

In the last half-dozen years there has been a revival of the old manuscript writing of the Renaissance period. Brought into England first, it made rapid progress in that country, especially in select private schools. Since there has not been much disposition to regard the new style critically,

the phenomenon of its growth shows many of the signs of a fad. The first claim made is its historical value; it was perfected and made standard at a time when handwriting was the sole means employed in written communication. The other claims are its legibility and beauty. Like the vertical style, it is easy to learn, and children can soon acquire, in the use of it, proficiency in legibility and uniformity. It has three disadvantages: (1) it has to be done slowly; (2) it has to be read slowly; and (3) it is hard on the eyes. The objection to the historical point is that manuscript writing was originally copying or writing from dictation, where the object was exact reproduction; to-day, neither of these purposes is of particular importance.

A sane conclusion seems to be that a practicable style should be adopted, and then all efforts concentrated on teaching it effectively. Every change that is made after the child begins to learn to write means delay in learning, because new connections have to be formed. Observation indicates that individuality in penmanship is not manifested to any degree during the first five or six years, and apparently sometimes during early adolescence a disorganization of early habits takes place, perhaps owing to irregular growth in the writing muscles. This last fact suggests that even if a passable proficiency has been reached in the lower grades, it is well, in the last year of the elementary school, to do some teaching in order to reawaken the primary connections. The disorganization may also be due to the pupil having used, in learning, artificial habits of movement and position and discarded them as soon as supervision was relaxed. At all events, some latitude must be left for individuality. If there is time, manuscript writing or lettering may be taught in addition to the orthodox style, since it can be mastered quickly. One style or the other should be recognized as a luxury, however. There

cannot be two basic methods of writing for the same person.

Materials of penmanship. There are two types of materials for writing. The first may be called local materials, the second composition materials. Local materials are of the same type as those used for beginning reading, and should be used in the first lessons. They consist of names, dates, titles of stories and books, mottoes and slogans, labels, and headings from the reading lessons. Just as in spelling, the material should have meaning before it is written. Later on, composition materials in the form of letters and stories may be introduced. Slips on which short sentences and letters have been written and copybook materials may be used for drills.

There is a marked reaction against using the complicated drill materials found in so many "systems" of penmanship — the ovals, loops, rings, hoops, and "push" and "pull" exercises. There is no proof that such exercises make better writers. The theory that they do make better writers is in direct conflict with all that is known in modern psychology as to learning to write. It is a better plan for pupils to practice directly what they desire to learn to write. Likewise, practice on the parts of letters does not train for expertness in making wholes; practice on words is necessary as well as practice on letters. It is one thing to write a letter form; it is another learning act to connect this letter with others. The connecting of any letter with any other letter is a separate act that has to be learned; there are just as many things to be taught as there are possible combinations of letters plus the form of the letters themselves.

Some authorities advocate postponing all writing until the latter half of the second grade. Drawing and pictorial representation would then precede writing. It is argued that this is the order in which the race developed these activities. They feel that pictures are meaningful to little

children, while writing is not and that skill in drawing carries over into writing. We believe it is a good idea to preface writing by drawing and pictorial or symbolic representation, not because these are of proved value in developing writing ability, but because they have value in themselves. It seems a logical conclusion to assume that if pupils get the idea that a drawing of a box stands for the idea "box," they will more easily perceive that the word in script form also stands for the idea "box." However, as soon as children can learn reading, which means learning that a printed symbol stands for an idea, they can learn writing. Writing, therefore, has a place as soon as reading begins.

Standards. Speed and legibility are the two main essentials of writing. Legibility takes precedence over everything else, and should never be sacrificed. There is no value in writing if what one writes is not readable. Beauty is a requirement of lesser importance; it is more likely to be sought for by people of artistic temperament than by the rank and file of people in the business world who pass judgment upon penmanship. Beauty of writing is due to qualities identical with those of beauty in design — proportion, form, regularity, alignment, and rhythm. One may seriously question whether beauty is a major aim in writing instruction, though the idea may be used to motivate attention to the writing process. There is a beauty in utility that mere adornment cannot surpass. Legibility takes account of two factors: (1) whether the meaning can be made out at all; and (2) the rate at which the writing may be read. Illegible writing is at the zero point; while writing that can be interpreted at the rate of thirty words a minute is, obviously, far less legible than writing that can be read at the rate of one hundred words a minute.

Good quality in writing comprises legibility and beauty. It is expressed in terms of scores by comparing a specimen

with a standard scale in which specimens are arranged in order from very poor to very good. Speed is measured in the number of words written per minute. The measure is fairer if the materials to be written are familiar and have been committed to memory. Standards on two scales, the Ayres and the Thorndike, are given for both speed and quality:

TABLE XV. GRADE NORMS FOR HANDWRITING

	SCHOOL GRADE						
	II	III	IV	V	VI	VII	VIII
Quality — Ayres Scale.....	44	47	50	55	59	64	70
Quality — Thorndike Scale.....	9.36	9.75	10.13	10.76	11.34	11.89	12.66
Speed-letters per minute.....	36	48	56	65	72	80	90

A number of investigations have shown that for at least seventy per cent of the pupils, standards of proficiency sufficient for all general purposes may be reached by the end of the sixth school year. This is on the Ayres Scale a quality of approximately sixty. Pupils who do not reach and keep this standard by the end of the sixth year should be given further training; those who are safely above it may be excused from further practice until such time as their writing declines in quality. If all writing is held up to a high standard, and carelessness frowned upon, children will continue to improve without further direct teaching until they have entered high school. The important point to work for is a good legible hand at the end of the sixth year — one up to at least quality sixty on the Ayres Scale.

How to teach penmanship. The teaching of handwriting should begin with board work. The method is the same as in teaching sight words. The teacher teaches the meaning of a word or of an easy phrase or sentence. She writes the word on the board, the pupils watching the process. The

pupils then pass to the board in turn and write, the teacher repeating her demonstration whenever it is necessary to do so. The pupils should write in large letters, five to six inches high. The next step is to compare their letters with the model and have simple corrections made. A little later,

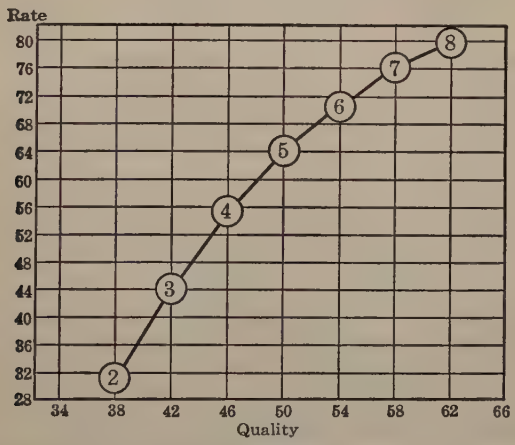

FIG. 16. GRADE STANDARDS IN RATE AND QUALITY OF HANDWRITING
(Ayres Gettysburg Scale)

the class should take up writing on paper. The proper materials are wide-spaced or unruled paper and large pencils or crayons. Board models may be used as before, or the teacher may distribute slips with copy written on them. No matter what is used for a model, the teacher should first demonstrate by writing the exercise before the pupils.

The models should equal in quality the standard sixty, at the very lowest, and should be executed after the form which the teacher wishes the pupil to learn. This is not so much because the pupils imitate the teacher, as because poor copy and poor performance are lacking in motivation stimulus and do not give a sufficiently high ideal for achieve-

ment. After having examined seventeen hundred specimens of teachers' penmanship, the authors concluded that

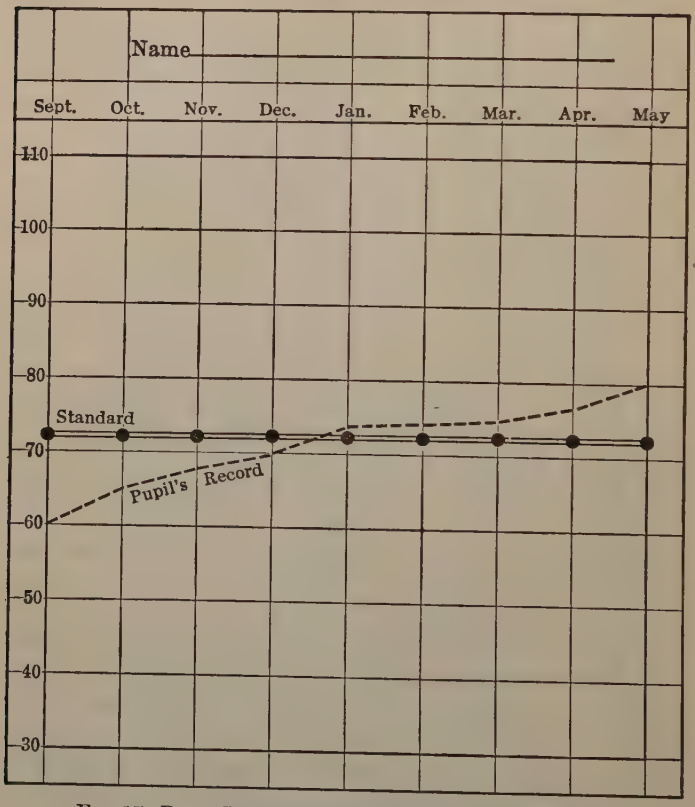

FIG. 17. PUPIL PROGRESS CHART IN HANDWRITING RATE
(Words per minute, sixth grade)

the handwriting of about one fourth of our teachers is not good enough to warrant their undertaking the teaching of penmanship. Women write better, on the average, than do men; the most legible writing found was in vertical and

semi-slant styles. The first suggestion is that the teacher should bring the quality of her own handwriting to the standard expected of the pupils.

Copybook writing is being severely criticized. Children start out with the copy at the top of the page for a model, and may do fairly well on their first line. As they go down the page, each succeeding line of their own instead of the original model becomes the pattern, and their writing grows progressively poorer. The form of the book, too, is such that it cramps the movement of the hand. The first objection can be overcome, it is claimed, by commencing at the bottom of the page and writing upward; the second by detaching from the book the sheet in use. Still another way, and one that obviates both difficulties is to cut off the copy lines from several sheets and have the children write successive lines, varying the copies, or to paste them on cardboard and keep the written lines covered with the model. In many schools, however, where the program is overcrowded and the enrollment large, copybook writing, with all its defects, is the only available method.

Position in writing. When they sit down to write, pupils should take a position directly in front of the desk, with the feet resting squarely on the floor, their posture comfortable, their muscles relaxed. The paper is placed at an angle of about thirty degrees with the edge of the desk. The left hand should rest on the paper in position to move the sheet as needed. The writing instrument should be grasped lightly between the thumb and the index finger, and should rest upon the second finger. The teacher should insist upon a natural, easy, and relaxed position for each individual child rather than require one special position for all. Differences in position due to differences in pupils are to be expected.

Authorities recommend the whole-arm movement in

writing. The idea is that such writing is more graceful and legible, and less fatiguing than that done in other ways.

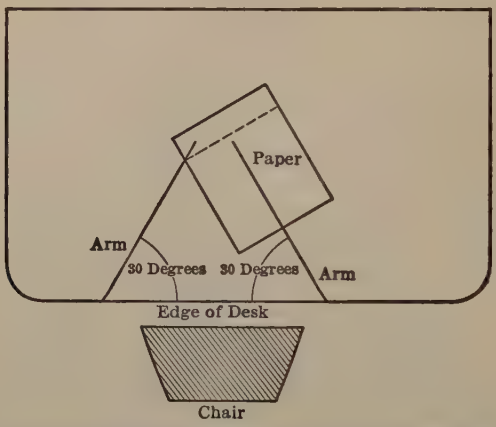

FIG. 18. PROPER POSITION OF CHAIR, ARMS, AND PAPER FOR WRITING

Children gain control over the small muscles of the fingers later than over the large muscles of the arm and shoulder, and so their finger movement in writing results in the peculiar cramped and jerky style so easy to recognize. Because of these facts, teachers may give as much time to movement drill as to teaching how to form letters and to write words. An objection to the whole-arm movement is that it does not function outside of the penmanship period. Observation shows that when pupils are off their guard they do not use the whole arm, but a combination hand-and-finger movement instead. Another objection is that most writing situations in life do not demand or permit the whole-arm movement, as can be proved by observing conditions under which salesmen, accountants, printers, bookkeepers, telegraphers, addressers, and others who make extensive use of penmanship, work. The great emphasis which some

teachers put upon movement detracts attention from the true end of practice, which is results; as a matter of fact it is better, in teaching, to give attention to results than to the way in which the results are achieved. Every year there is an increasingly large number of converts to the idea that if pupils take easy natural positions, and forget about movement, their writing efficiency will improve more rapidly and more permanently than under present practices.

Rhythm. Another custom is to count while writing. The idea here is that counting spaces the movements in regular order, and thus determines when one stroke will end and another begin. It is believed that under this method execution is smoother and easier, and the product more uniform. Sometimes phonograph music takes the place of counting. The use of rhythm seems to lessen fatigue, increase interest, and make for better attention; at least, those who have made rhythm studies in industry have arrived at this conclusion. Our opinion is that the beneficial results under rhythm come from heightened emotional tone; that is, from additional motivation, and not from any effect that rhythm may have on the length or the heaviness of strokes.

If this be true, it is not essential for the teacher to be sure the down stroke is made on the count of one and the up stroke exactly on the count of two. The only thing that is necessary is for her to count, or have the children count, in a lively cheerful tone, play a lively piece on the phonograph, or let the children sing some favorite song. If counting is regularly spaced, the only way it can determine the length of stroke is by the writer varying his speed, making it slower on the short strokes and faster on the long ones. The consequences of such a practice is lack of uniformity, since the whole theory of rhythm is uniform rate of movement.

Motivation. The usual types of motivation work well in

the teaching of handwriting. They are speed and quality tests, having honor rolls, giving certificates or buttons, and the posting of the best specimens. If our theory of rhythm is right, counting, instrumental music, and singing also furnish motivation. The Ayres Gettysburg scale should be posted on the bulletin board and pupils directed to compare their own work with the standard and to keep a record of their grades. In making comparisons they note defects in their own work — faulty spacing, lack of uniformity in height and slant, and poor letter form — and in their next practice try to make improvements. In one of the schools at Oakland, California, a certificate in penmanship is a guarantee of quality and speed, and shows as well that the holder

> Has worked hard.
> Has persistence.
> Is careful.
> Is clear-eyed.
> Has a steady hand, and
> Is willing to stay at one thing until he masters it.

Left-handedness. It has been the rule to change left-handedness in a pupil to right-handedness as soon as penmanship practice begins. The reasons for making the change are: (1) left-handedness looks awkward; (2) school lighting and writing conveniences are designed only for right-handed people; (3) the hand gets in the way of vision in the writing act; (4) the process is more fatiguing; and (5) in left-handed writing the quality and speed tend to be below standard. Some claim that this change is often accompanied by speech disturbances, and advise letting well enough alone. The accepted conclusion now is that if the change can be made readily, and without resistance on the part of the child, it is advisable for it to be made. If any compulsion is necessary, if emotional disturbance accom-

panies the effort, or if the period of learning to write is unduly prolonged the plan should be given up.

Measurement and diagnosis. The following devices may be applied to the measurement of penmanship:

1. The Ayres Scale, Gettysburg edition. Considers legibility.
2. The Thorndike Scale. Considers legibility, beauty, and general merit.
3. The Starch Scale. Can easily convert scores into school marks.
4. The Freeman Scale. Considers slant, alignment, line, letter-formation, and spacing.

C. T. Gray has designed a score card for judging penmanship. It takes account of nine factors and perfect scores, as follows:

	Perfect Score
1. Heaviness of line	3
2. Uniformity and regularity of slant	5
3. Size — uniform, too large, too small	7
4. Alignment — accuracy of	8
5. Spacing of lines — too close, too far, uniformity	9
6. Spacing of words	11
7. Spacing of letters	18
8. Neatness	13
9. Formation of letters	26
Total perfect score	100

The Freeman Scale and the Gray Score Card both possess diagnostic values. A low score on number 7 in the score card would indicate that more attention should be given to the correct spacing of letters, and so on. Every school should keep the Gettysburg Scale posted in the classroom, so that the pupils may compare their work frequently with the standards there given.

Summary. Spelling and penmanship are two important divisions of language study. The object in learning spelling

is to memorize the letters of words in their proper order; the object of penmanship is to represent ideas by written signs. The study of spelling should be confined to words absolutely needed in written language, lists of which are now available. It will save time to test pupils' spelling before making assignments. Study should be directed according to a few well-known principles based on the laws of learning. A more accurate measure of ability may be obtained by using timed sentences than through column words. Penmanship of the semi-slant style is advised; materials should be local in nature, or selected from the regular composition exercises. Speed and quality are the leading factors to consider; the latter comprises legibility and beauty. Teaching should begin with board work, pass next to seat work with large pencils or crayon, and finally to the use of pens and practice paper. Position is to be emphasized to the extent of having the pupil comfortable, relaxed, and in good hygienic posture. Paying much attention to movement is probably unjustified. Rhythm has values in motivating work and decreasing fatigue. Penmanship results may be evaluated by means of standard scales and score cards.

EXERCISES AND PROBLEMS

1. Make a list of the most common causes of failure in learning how to spell. How may each be overcome?
2. Show the relation of spelling to language. Of penmanship to language. Is there any truth in the saying that spelling is writing?
3. What are the advantages of testing pupils in spelling before making assignments? At what grade would you begin testing? How many words would you test with at a time?
4. What is meant by learning to spell a word? How many words should be learned? How many new words should be assigned daily?
5. Prepare a timed-sentence test for the fourth grade, based on words in the Ayres list.
6. Look into the history of manuscript writing. When was it most extensively practiced? Under what conditions? To what extent is copying demanded to-day in such vocations as bookkeeping, selling,

and public service? Would manuscript writing serve well in such a vocation as selling? Discuss.

7. When should instruction in writing begin? What attainment is it reasonable to expect by the end of the sixth grade?
8. Present criticisms of the copybook method of teaching penmanship. How may the objections be overcome?
9. Point out the fallacy, from a psychological point of view, of having pupils drilled on such penmanship exercises as loops, ovals, and lines. Why should practice be on words?
10. What is the object of counting in teaching penmanship? Is it effective for its purpose? Discuss.
11. Prepare a plan for teaching a lesson in penmanship. In spelling.

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CHAPTER XVII

TEACHING ARITHMETIC

Present tendencies in arithmetic teaching. Up to fifteen or twenty years ago most arithmetic was taught by rule. Rules for all arithmetical processes, from adding numbers to solving problems in proportion and cube root, were first committed to memory by the pupils and then applied. The next stage was reached when analysis and demonstration took the place of memorizing. In neither case did it seem to make much difference what the materials were; the important thing was to go through the method. The theory was that the process developed the mind, including the ability to judge, think, and reason, and made for such traits as accuracy, honesty, and quickness. This theory has been almost wholly discarded in favor of the stimulus-response psychology.

Arithmetic is now taught for its utilitarian values; that is, for the uses to which it can be put in life. Arithmetic that cannot be used is not considered as worth teaching. The materials are selected from the home, the bank, the store, the factory, and the office. The method is not unlike that followed in language teaching. While language expresses meaning through symbols called words, arithmetic expresses meaning through symbols called *numbers*. Arithmetic deals with only one characteristic of things, that called *quantity*. The teacher sets up number situations to which the children respond. In this way connections are made, as when the addition combinations are learned, or when the multiplication table is mastered. Following the making of these simple and direct connections comes the task of making relationships between number-facts in one situation and number-facts in another. In its highest form this is

called problem-solving, but psychologically it does not differ at all from the judging and reasoning which goes on in learning language. (See page 270.) The two pronounced tendencies in teaching arithmetic are: (1) to use materials taken from life, and (2) to instruct by a psychological method.

Aims of arithmetic. When the chief aim in the teaching of arithmetic was mind training, it was considered a very difficult subject. Pupils found it hard to understand, and a disproportionate amount of time was allotted to it. The results, too, were unsatisfactory, and parents and employers complained of the inability of the school's product to meet the most ordinary arithmetical situations in real life. The school first responded to the criticisms by giving more time to the teaching of arithmetic, but investigations soon showed that there was practically no connection between arithmetical proficiency and the length of the weekly allotment. Schools that taught arithmetic seventy-five minutes a week secured as good results as those that taught it two hundred minutes a week.

There are two probable explanations of this situation. First, it is likely that the methods of teaching were poor and the children uninterested and inattentive. The teaching of symbols went on independent of the teaching of meanings. Second, it is probable that the aims in the instruction given were impractical or indefinite. Especially was there misplaced emphasis. The school was too much concerned with the manipulation of numbers, to have regard for their practical usefulness. As a consequence, the teaching failed and social needs were neglected. It would be well, therefore, if we would concentrate on two main objectives in arithmetic. They are:

1. Automatic skill in the fundamental operations.
2. Proficiency in applying these skills to the common number-problems of everyday life.

1. **Automatic skill in fundamentals.** The fundamental operations of arithmetic are addition, subtraction, multiplication, and division. Each of these processes has been analyzed into its combinations, so it is known how many connections must be made before the operations have been sufficiently taught. Every connection must be made specifically. We used to assume that if pupils learned that three plus two equals five, they would know that two plus three equals five. We thought that if they learned that six times nine is fifty-four, they would know that nine times six is fifty-four. On the basis of that earlier thinking, it was concluded that there were forty-five combinations in addition. This left out of consideration the reverse of every combination, and omitted zeros. The original direct combinations plus the same in reverse order, and plus the zeros, give a total of one hundred addition facts which it is necessary for the teacher to make automatic; that is to say, there are one hundred addition combinations. Directly the stimulus three plus seven or seven plus three is given, there should be given instantly and without reflection the response ten. The addition combinations are given in Table XVI. To use the table, add in turn each form in each of the columns to the term in the top row.

Difficulty in combinations. The number combinations are not of equal difficulty; some are very easy, some are hard. More practice should be given to the harder combinations. To the general surprise, a recent investigation showed that more than twice as much time was being given to easy combinations as to hard ones. Test results under present methods of instruction give information as to ease and difficulty of combinations, as follows:

1. The easy-addition combinations are those whose sums are below ten; the next are two-number additions, one number being ten or more and not carrying over to the next highest

TABLE XVI. THE ADDITION COMBINATIONS

	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

order, as twenty-four plus three; the next are of the same type except that the sum carries over into the next order, as twenty-four plus seven; and next, single-column addition of more than two digits.

2. The easiest subtraction combinations are those that do not involve borrowing.
3. The easiest multiplications are one, fives, tens, doubles, and the smaller products.
4. The easiest divisions are those in which the divisor is a single digit and goes into each digit in the dividend without remainder, as three into thirty-nine.

Zero combinations present many difficulties. The concept that three or four times zero equals zero is one that many pupils have trouble in mastering. Subtracting from zeros is also troublesome, as is the bringing down of zero in the dividend. Borrowing and carrying cause the most difficulty, as is shown by the fact that mistakes in answers so often run only one or two. The only recourse is to teach each specific connection, no matter how unimportant it seems, until it is definitely formed. Most courses of study

require the completion of the hundred addition combinations by the end of the second grade, and of all the essential com-

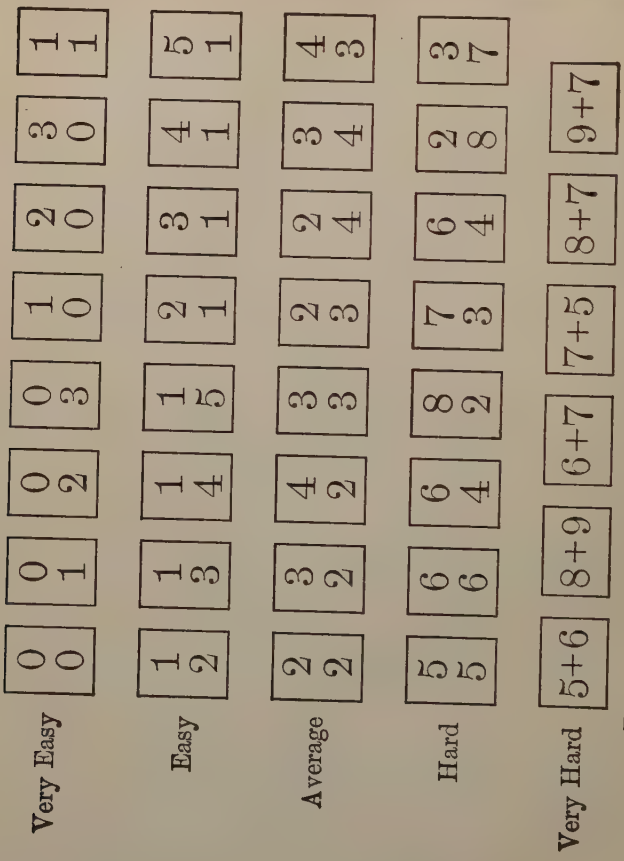

FIG. 19. FLASH CARDS FOR TEACHING ADDITION COMBINATIONS
(Cards 6 × 8 inches in size; figures 2½ inches high)

binations by the end of the fourth grade, with systematic review thereafter. The more modern schools are deferring the beginning of formal arithmetic till the third grade.

Drill in arithmetic. Three steps are indicated in arith-

metical teaching: (1) development or initial presentation; (2) drill; and (3) application. Thus, after the connection nine times seven equals sixty-three has been once made,

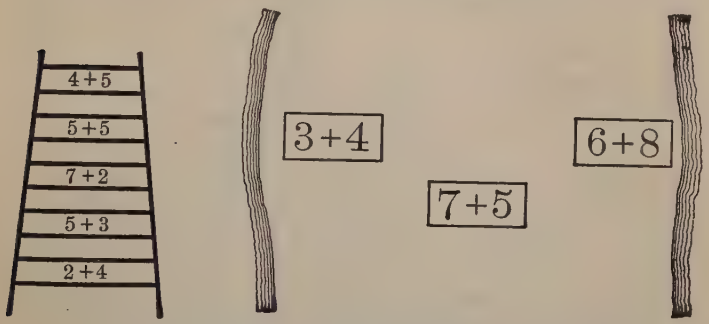

FIG. 20. TWO TYPES OF GAMES FOR ARITHMETIC DRILL

Ladder Game, for drill in the fundamental processes

Stepping Stones Game, for drill in the fundamental processes

it should be renewed frequently. How frequently varies with the vividness and recency of the initial teaching, with the ability of the pupils, and with the difficulty of the connection. Some pupils will learn to make the connection after drilling on the combination five or six times; with others, the drill may have to be carried on through thirty times.

FIG. 21. DOMINO DRILL CARDS FOR ADDITION AND SUBTRACTION

Since the processes cannot be applied effectively until they are learned, drill should be concentrated in the lower grades, beginning with the second and reaching the peak in the

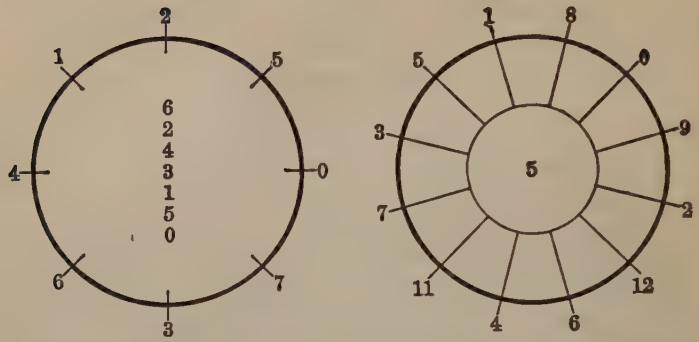

Fig. 22. A Circle Game for Addition and Multiplication Drill

third and fourth. In the upper grades, enough drill is necessary to keep performance up to one hundred per cent accuracy and a good rate of speed. (See Figure 23 for suggestions.) Drill periods should always be short — never more than ten minutes in length.

Two kinds of materials for facilitating drill may be had. The first consists of devices made by the teacher, the second of printed matter. Among the board devices which the teacher can employ are:

1. *Table drills.* This includes addition and subtraction combinations, and multiplication and division tables, on the board or on charts.
2. *Circle or wheel drill.* The teacher puts a wheel on the board, with a number in the center and other numbers on the rim. The pupils perform the operations as directed, using the number in the center as minuend, multiplier, divisor, or as one of the addends.
3. *Ladder drill.* The teacher draws a ladder on the board and places combinations on the rungs. The pupils climb the ladder by working the combinations.
4. *Flash-card drill.* The combinations are written on cards, which are displayed before the class. The first pupil to give the answer gets the card.

5. *Arithmetic matches.* Pupils work in pairs at the board, or compete by teams at the seats.
6. *Arithmetic games:* dominoes, store, fishing, number blocks, clock, crokinole, number cards, odd or even, beanbag, calendar, banking, the doll house, and reading numbers from books and directories.

Improvement takes place more rapidly when special drill exercises are used, such as are found in printed materials of which the following are examples:

Courtis. *Standard Practice Tests in Arithmetic.* World Book Company, Yonkers, New York, 1920.

Knight, Ruch, and Studebaker. *Arithmetic Work-Book.* Scott, Foresman and Company, Chicago, 1925.

Osburn. *Corrective Exercises in the Fundamentals of Arithmetic.* Houghton Mifflin Company, Boston, 1924.

Thorndike. *Exercises in Arithmetic.* Rand, McNally and Company, Chicago, 1920.

Drill in making change. Training in making change is one of the most important phases of drill. As taught in most schools, it is regarded as a form of subtraction. For example: "A man buys a bill of groceries amounting to five dollars and fifty cents, and gives in exchange a ten-dollar bill. How much change should he receive?" The pupils are instructed to take away five and a half dollars from ten dollars to find the answer. In carrying on the actual transaction in a store, however, subtraction is not used. Instead, the clerk uses an additive method, commencing with the amount of the bill, five dollars and fifty cents, and adding to it until ten dollars are reached. The problem really is, "How much must be added to five dollars and fifty cents to make ten dollars?" Some people believe that all subtraction should be carried on by the additive, or Austrian method as it is called, arguing that the hundred combinations in addition suffice also for subtraction, and so save

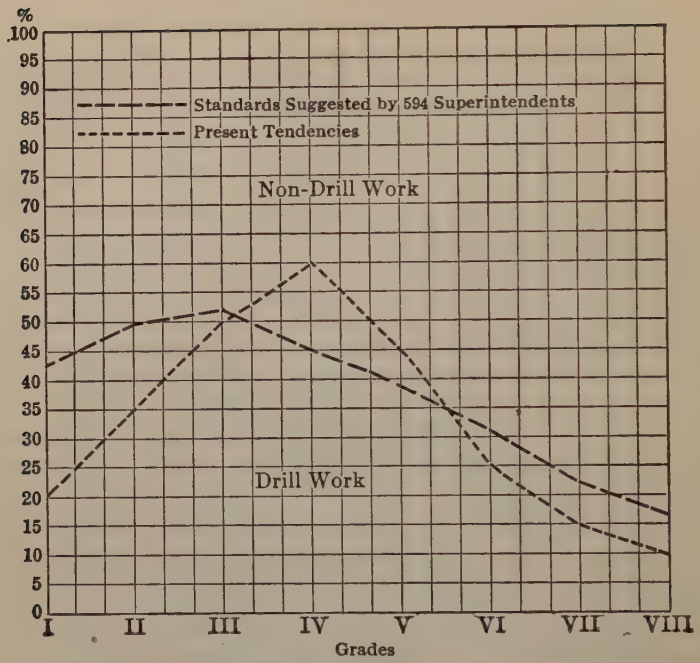

FIG. 23. PERCENTAGE OF DRILL IN ARITHMETIC RECOMMENDED FOR EACH GRADE

time as well as apply to change-making. However, it has been found that the subtractive concept is really different from that of addition, and that the mind works more satisfactorily and accurately when the "take-away" method is used than when the "add-to" method is used.

Our suggestion is that subtraction in general be taught by the "take-away" method, and that a separate method of drill be used for teaching change-making. Freeland and Staffelbach (Teachers College, San Jose, California) have developed drill sheets that give greater accuracy than can be obtained through the usual subtraction method or by

means of toy money. These drill sheets are recommended. A device which the teacher can make for use on the board consists of a "change table," of which the form given below is an illustration. The pupils fill out the table by checking the number of cents, nickels, dimes, and so forth that they would give in change. It therefore compels the use of the practical method. Pupils should check one another's work and compute the totals as balance sheets.

TABLE XVII. A CHANGE TABLE

AMOUNT OF BILL	AMOUNT PAID	DENOMINATION OF MONEY GIVEN IN CHANGE							TOTALS
		1¢	5¢	10¢	25¢	50¢	$1.00	$5.00	
$.03	$.05	//							$.02
.07	.10	///							.03
.17	.25	///	/						.08
.29	.50	/		//					.21
.87	1.00	///		/					.13
1.13	2.00	//		/	/	/			.87
2.65	5.00			/	/		//		2.35
3.22	3.50	///	/	//					.28
4.18	5.00	//	/		/	/			.82
5.33	10.00	//	/	/		/	////		4.67
6.80	7.00			//					.20
7.05	7.50			//	/				.45
8.70	20.00		/		/		/	//	11.30
10.11	15.00	////		/	/	/	///		4.89
11.35	20.00		/	/		/	///	/	8.65
13.81	15.00	////	/	/			/		1.19
Totals $75.76	$111.90								$36.14

Check: $75.76 plus $36.14 = $111.90

2. **Solving common problems.** Mastery of the fundamental processes does not automatically result in proficiency in applying them to the solution of problems. Often a pupil is heard to say that he can work a problem if some one will tell him whether to add, subtract, multiply, or divide. To know when to use and combine these operations in arithmetical situations is the essence of problem-solving. Skill in the fundamental processes only furnishes a tool; how to use the tool is an entirely different matter. The failure to develop and give practice in applying a particular

skill in the types of situations in which it will be needed in life marks, in arithmetic, the chief difference between poor and good teaching.

A problem must be comprehended before it can be solved. Unless the conditions involved are understood the procedure is mere guesswork. Thus, failure to read a problem accurately is often mistaken for failure in arithmetic. To increase the pupils' comprehension, arithmetic should be correlated with reading. There should be practice in the silent reading of problems. Often the pupils do not know the meanings of the terms used in arithmetic, and often they fail to grasp the steps of the problem because they ignore the meanings of the punctuation marks. To remedy this, the pupils' knowledge of the meanings of terms and punctuation marks should be tested, and the necessary language-vocabulary should be built up. Problems without numbers offer good exercises in comprehension; the so-called mental arithmetic has values in comprehension. There should also be practice in making and solving original problems. Problems in the text which are couched in difficult language may have to be simplified. The teacher should not mistake failure due to language difficulty for inability in arithmetic.

Steps in problem-solving. After the fourth grade, problem-solving should receive increasing emphasis, with some attention given to the method of attack. In a general way, the solution may be outlined as consisting of five steps: namely,

1. Careful reading in order to
   a. Grasp what is wanted or called for
   b. Get a clear idea of the facts given
2. Approximation of answer
3. Planning the solution
4. Execution of the plan
5. Checking results

The first step is a matter of understanding what is read. One way to deal with comprehension is to assign arithmetical exercises for an occasional silent-reading period, using the accepted methods. In making the assignment, the teacher may have the problems read and make a statement of: (1) what is wanted, and (2) what is given. Estimating the answer in advance serves two purposes: (1) it tests as to whether the problem is understood, and (2) it prevents absurd blunders. Planning the solution consists in deciding how to combine the four fundamental processes so that the desired information may be ascertained from the known facts. This planning is the distinctive element in problem-solving that demands reasoning ability. Once the solution has been planned, the execution should be carried out according to the best practice in business, with all possible short cuts used. The so-called crutches, such as finger-counting, making dots, counting, and writing in the number that is carried or borrowed, should not be tolerated.

The habit of checking results should be formed early. In actual life it is the only guarantee of accuracy. Bookkeepers, engineers, statisticians — all who make calculating a business — check their work. Every one is likely to make errors, and in business errors are likely to mean loss to the person who makes them. One mistake in a thousand calculations would result in the discharge of a bank clerk, while a salesman who gives back too much change has to make up the loss out of his own pocket. Computations in school work must be accurate. The work must be carefully checked, mistakes detected and corrected, and the final answer verified. This is a subject which should be stressed often to the pupils. It is best to insist that all answers be checked. The object in the practice is to make checking a habit, and habit-forming permits of no exceptions. The method to be used varies with the operation. The first

thing to do is to compare the answer with the estimated answer. Then the work may be gone over the second time and multiplications checked by divisions, subtractions by additions, and so on.

Types of problems. The types of problems which pupils are taught to solve are of practical consequence. The new arithmetics do not contain problems requiring the pupil to calculate the length of a fish after being given the length of its tail and the relation between that and the length of its body; to divide a grindstone into three equal parts; or to estimate the number of cubic feet of stone in the great pyramid. New arithmetics have pupils compute the cost of a school lunch, the amount of a bill of groceries, and the cost of operating an automobile. It may be said that the problems should be adapted to the pupil's maturity, preparation, and experience. While they should be such that he can master them by his own efforts, they should be hard enough to challenge his best efforts. They should be real problems, arising out of situations which are real to the pupil.

Beginnings in arithmetic (first and second grades) should include counting, measuring, reading numbers, and a wide variety of information and application of which the following items are typical:

Telling time
Reading a thermometer
Spending money in play
Ordering from a catalogue
Checking savings bank deposits
Finding pages in a book
Reading house numbers
Measuring height and distance
Buying stamps
Making charts
Keeping scores of games
Using the calendar
Counting money
Playing store
Measuring and weighing
Making change
Counting in rhymes and jingles
Reading telephone numbers
Reading Roman numerals
Making problems
Keeping a room record
"Counting" games

PHYSICAL ACTIVITIES STRESSING NUMBER WORK

First, second, and third grades — building in the sand, ring-toss, tossing the ball, jackstones, and on the slide

Essential processes. With the third grade, pupils should commence the learning of the fundamental operations. Drill should be perfected in these by the end of the fifth grade. The upper grades should obtain nearly all the drill they need through working real problems. The practical arithmetical problems of life are few in number, and few are the essential processes required for their solution. One should be able to read and write numbers to one million, Roman numerals to one hundred, and common fractions and decimals to three places. A summary of essentials is as follows:

1. Addition, subtraction, multiplication, and division of:
   - *a.* Small numbers. About nine out of ten practical computations deal with numbers less than one hundred.
   - *b.* Simple common fractions. Most fractions in common use have denominators of 2, 4, 8, 16, 32, and 64. It is surprising how seldom one third and two thirds appear. If the teacher will refer to prices and sizes in mail-order catalogues she will see what kinds of fractions are needed.
   - *c.* Small decimal fractions. For practical purposes decimals are not often carried out to more than two places, but the third place is useful in determining the best value to give the second. If the third number is less than five it is disregarded; if more, the second number is increased by one.
2. Denominate numbers
   - *a.* Length: inch, foot, yard, and mile.
   - *b.* Surface: square inch, square foot, square yard, square mile, lot, block, acre, and board foot.
   - *c.* Cubical contents: cubic inch, cubic foot, cubic yard, and cord.
   - *d.* Dry measure: pint, quart, gallon, and barrel.
   - *e.* Liquid measure: pint, quart, peck, and bushel.
   - *f.* Avoirdupois weight: ounce, pound, and ton.
   - *g.* Time measure: second, minute, hour, day, week, month, year, leap year, decade, century.
   - *h.* Counting: units, dozen, gross, score, quire.

i. United States money: cent, nickel, dime, quarter, half dollar, dollar.
j. Temperature: degrees Fahrenheit.
k. Gas, electrical, and water-meter measurements.
l. Miscellaneous: calorie, horsepower.

3. Finding the perimeter, surface, and volume of common planes and solids.
4. Use of common aliquot parts of 100: $25 = \frac{1}{4}$, $33\frac{1}{3} = \frac{1}{3}$, $12\frac{1}{2} = \frac{1}{8}$, $10 = \frac{1}{10}$.
5. Use of simple percentages and simple interest.

Problem situations. The solution of problems encountered in life requires a high degree of proficiency in the foregoing essentials. These essentials should all be as thoroughly mastered as the combinations of the four fundamental operations. It is best to teach them in situations such as those in which they will be used in real life, that is, in solving real problems. Some suggested situations around which school problems should center are:

Personal budgets
Banking transactions
Building a home
Bonds as investments
Buying and selling at a store
Carpentry
Buying a home
Commercial discount
Commission
Cost of owning a car
Cost of owning a home
Cost of food and clothing
Cost of labor
Drawing to scale
Taxes
School bonds
Drawing charts and graphs
Insurance
Interest
Inventories
Marketing
Mortgages
Furnishing a home
Postal savings
Profit and loss
Promissory notes
Buying a lot
Reading gas, water, and electric meters
Real estate transactions
Stocks as investments
Transference of money
Public finance

Subjects which used to occupy a prominent place in arithmetical courses, but which are now ruled out, are:

1. Greatest common divisor and least common multiple (except by inspection)
2. Most of mensuration — trapezoid, sphere, polygons, trapezium, frustums
3. Surveyor's table, foreign money, troy weight
4. Fractional problems involving more than three places
5. Addition, subtraction, multiplication, and division of compound numbers
6. Longitude and time
7. Exchange, true discount, proportion, and partnership
8. Reductions in denominate numbers
9. Ratio, except simple fractional form
10. Square root and cube root
11. Partial payments
12. Apothecaries' weight

The recitation. There is a tendency for the teacher to look upon the recitation period as a time primarily for testing the pupils. This is a wrong conception. It is rather a time for the coöperative effort of pupils and teacher. In the arithmetic recitation period the purpose is to increase arithmetical ability. A few minutes should be devoted to vigorous drill and the remainder of the time given to problem-solving and the developing of new knowledge. In every grade above the fourth, at intervals of a week or two, three or four minutes should be used for drilling on the fundamentals for speed and accuracy, and individual progress charts of this work should be kept. If difficulties appeared in the previous assignment, they should be cleared away; from time to time there should be brief reviews.

Most problems in life situations are solved orally or by the use of only a few figures. A conscious effort should be made, in school work, to increase the amount of oral work. Every new topic or new principle should be introduced by simple oral problems. All written work should be preceded by oral. Nearly all the arithmetic taught in the first and second grades, three fourths of the third- and fourth-grade

work, and one third of the upper-grade arithmetic work should be oral. No home work should be assigned before the fifth grade, and when assigned it should always be supplementary, or drill on easy examples. It should never consist of work in which the pupils will have to be helped.

Using the textbook. Although the textbook has probably done more than anything else for the improvement of arithmetic instruction, its misuse has led to ineffective work. Teachers and pupils are often slavishly dependent upon it. The teacher fears to omit a single exercise or problem; she insists upon the pupils' working everything in the book by the book's methods. If everything in the book must be developed and drilled on, there is no time for exercises of local and personal importance. Unless the book is a good one, the pupils may solve all the problems and still be entirely unprepared for many of the essential problems of life.

The main use of the textbook is for reference and guidance. It helps the teacher to organize her work, gives good teaching suggestions, and provides a collection of graded drill exercises and problems. It offers a chance for the study of arithmetical language, and some of the material can be assigned for silent reading. The average pupil usually gets a better understanding from the teacher's explanations than from reading a text, and so every new topic should be developed orally by the teacher and should be followed by reading. The teacher should not hesitate to drop some of the textual matter and substitute for it materials drawn from the local community and of the pupils' own making. All impractical examples and subjects should be omitted (see page 331).

A lesson plan. The following lesson plan [1] will illustrate the teaching of one phase of the work in arithmetic.

[1] This plan was prepared by Edythe Yore, State Teachers College, Chico, California.

UNIT OF INSTRUCTION: Division of decimals

TEACHER'S AIM: To develop skill and accuracy, and to acquaint pupils with simple methods of division of decimals

PUPILS' AIM: To learn methods involved in division of decimals

INTRODUCTION: Review of speed test in division of decimals by whole numbers

1. $24.45 \div 15 =$
2. $72.18 \div 6 =$
3. $\$36.48 \div 12 =$
4. $\$25.50 \div 5 =$

(Time limit, 3 minutes. Examples taken from work of the preceding day.)

GAME OR MOTIVATED DRILL: (14 examples in 8 to 12 minutes)

1. $18.99 \div 9 =$
2. $5.64 \div 4 =$
3. $7.28 \div 7 =$
4. $63.09 \div 9 =$
5. $75.60 \div 15 =$
6. $85.80 \div 12 =$
7. $56.55 \div 13 =$
8. $49.02 \div 6 =$
9. $77.50 \div 25 =$
10. $63.36 \div 8 =$
11. $46.34 \div 7 =$
12. $95.36 \div 8 =$
13. $17.22 \div 14 =$
14. $67.84 \div 16 =$

Two teams may be chosen, with captains in charge. The pupils are numbered 1, 2, 3, 4, etc. The teacher calls two numbers of the rival teams. The pupils run to the board and work the examples. The one who first finishes correctly wins a point for his side. By another plan, number 1 is matched against 2, 3 against 4, etc. The pupils work all examples at the seat, the one who gets the most right in the allotted time wins a point for his side. Individual scores are entered in record books.

SUPERVISED OR DEVELOPMENTAL LESSON: (Time, 15 to 20 minutes)

Steps:

1. $25.44 \div 6 =$
2. $25.44 \div .6 =$
3. $\dfrac{25.44}{.6} =$
4. $\dfrac{25.44}{.6} \times \dfrac{10}{10} =$
5. $\dfrac{25.44}{.6} \times \dfrac{10}{10} = \dfrac{254.4}{6} = 254.6 \div 6 =$

The first is known procedure. The second shows the difference between the old form and the new. The third gives the fractional form. Finally, changing the denominator from .6 to 6 multiplies it by 10. The numerator must also be multiplied by 10, making it 254.4. We thus have the old form.

DRILL OR APPLICATION: (Time, 10 minutes)

1. 72.36 ÷ .6 =	6. 8.47 ÷ .7 =
2. 7.53 ÷ .3 =	7. 37.8 ÷ 1.8 =
3. .625 ÷ .5 =	8. 3.75 ÷ 1.5 =
4. 81.99 ÷ .9 =	9. .736 ÷ .4 =
5. .159 ÷ .3 =	10. 1.82 ÷ 1.3 =

Diagnosis of difficulty. It is a fortunate school in which no one of the pupils has difficulty in arithmetic. It has been the custom to keep in after school the pupil who "does not get his arithmetic lesson," or else assign him more problems for working at home. The idea was that he could get it all right if only he had more time. That was the wrong idea and the wrong procedure. The purpose should be, first to find the cause of the defect and then to prescribe a remedy. Failure to comprehend problems is responsible for about one third of the errors made in arithmetic. The remedy, then, consists in effective silent reading for comprehension. Further analysis will be needed for finding out why pupils fail to read well silently.

A second probable cause of difficulty is inadequate intellectual capacity on the part of the pupil. An intelligence test in a specific case will reveal whether or not this is the reason for a child's poor work. A great injustice is often done by insisting that children attempt work in arithmetic for which they do not have the capacity. The effect of this is failure and discouragement as well as the development of undesirable behavior, such as cheating, truancy, and rebellion. If the intelligence test cannot be given, at least the teacher can try to assign work that the pupils can do. All except the very inferior can learn to add, subtract, multiply, and divide; all can learn simple informational facts and can take part in arithmetic drill.

A third cause is a pupil's lack of mastery of the fundamental operations, a condition which can be easily detected

by the occurrence of errors, by lack of speed, and through test results. In all cases the teacher's aim should be to find out the cause of difficulty, remove it if possible, and apply corrective measures.

Testing results. Arithmetic lends itself to exact measurement better than any other school subject. There are two things to be measured: (1) skill in the fundamental processes, and (2) ability to solve problems. In preparing informal tests, select exercises of as nearly as possible the same kind and the same degree of difficulty. Prepare more than any pupil can solve in a very short period, working as fast as he can. The score is the number of exercises that he gets right. One pupil may have an addition test, a subtraction test, a percentage test, and a decimals test; others may have other combinations. In any case, the teacher's rule should be to choose the test materials from the materials taught, and to present them in the way that they are taught. Unusual and catch problems do not belong in a test. A sample from the Cleveland Survey Tests is given as a model:

SET A. ADDITION

Time, 30 Seconds

1	6	9	0	4	1	7	9	3	2	1	3	6
2	6	5	1	2	3	7	6	0	4	5	8	9
0	3	8	9	7	8	2	1	4	8	0	2	3
7	2	1	9	6	0	5	6	7	9	5	7	1
4	7	0	3	1	2	5	6	7	5	8	6	9
6	9	8	5	4	9	8	0	2	1	3	5	0
4	2	9	7	4	5	7	4	8	0	3	9	2
3	2	3	8	0	2	1	9	6	0	4	1	8
5	0	6	2	4	5	1	6	3	7	9	0	4
7	4	3	1	8	9	0	2	3	4	8	6	5

The following list of standardized tests in arithmetic is given to choose from:

Fundamentals

The Courtis Standard Research Tests in Arithmetic. The author, 1807 East Grand Boulevard, Detroit, Michigan.

The Woody-McCall Tests in Arithmetic. Bureau of Publications, Teachers College, Columbia University, New York City.

The Monroe Diagnostic Tests in Arithmetic. Public School Publishing Company, Bloomington, Illinois.

The Peet-Dearborn Progress Tests in Arithmetic. Houghton Mifflin Company, Boston, Massachusetts.

Osburn's Corrective Exercises in the Fundamentals of Arithmetic. Houghton Mifflin Company, Boston, Massachusetts.

Problem-Solving

The Stone Reasoning Tests, Bureau of Publications. Teachers College, Columbia University, New York City.

The Monroe Standardized Reasoning Tests in Arithmetic. Public School Publishing Company, Bloomington, Illinois.

Courtis Reasoning Tests in Arithmetic. The Author, 1807 East Grand Boulevard, Detroit, Michigan.

Summary. About twelve per cent of the school time is given to the teaching of arithmetic, though the tendency is to decrease the actual time that is put on the subject and to place more emphasis upon its connection with real-life situations and essentials. The two aims of instruction are skill in the fundamental operations and ability to apply the skill in solving practical problems. The basic combinations in addition, subtraction, multiplication, and division should be well taught. Not all combinations are of equal difficulty, and drill should be proportioned according to need, giving more drill to the more difficult exercises. In problem-solving attention should be centered on comprehension, estimating the answer, planning the solution, applying the processes to the solution, and checking results. Only

materials taken from child and adult life should be used in teaching arithmetic. This means the elimination of much obsolete matter and the addition of matter of present worth in its stead. The recitation should be used mainly to develop new topics and to perfect connections already formed. The textbook serves chiefly for guidance. Results should be tested at the beginning of the year, at the close, and at convenient times in between.

EXERCISES AND PROBLEMS

1. Make a list of the average person's daily routine duties which require a number concept.
2. The advent of various types of computing and calculating machines has reduced the necessity for arithmetical skill in modern business concerns. Has the need of the average person in modern life for skill in the fundamental processes increased or decreased?
3. Explain why arithmetical ability is often confused with reading ability.
4. Suggest some good ways for checking each of the four fundamental processes. Explain the "casting out 9's" method, and comment on its use.
5. What are the main characteristics of a good arithmetical problem?
6. Discuss the relative importance of oral and written work in arithmetic.
7. Explain why the efficient teacher does not teach by any rule-of-thumb method.
8. Discuss the proposition that a text in arithmetic should not be placed in the hands of the pupil before the third grade.
9. What are the purposes of a recitation period in arithmetic?
10. List all the personality traits which you think can be cultivated through arithmetical instruction.
11. Prepare a plan for a drill lesson in multiplication.

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La Rue, D. W.: *The Child's Mind and the Common Branches,* chap. XIX.

Lennes, N. J.: *The Teaching of Arithmetic.*
Monroe, W. S., DeVoss, J. C., and Kelley, F. J.: *Educational Tests and Measurements*, chap. II.
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Parker, S. C.: *Types of Elementary Teaching and Learning*, chap. VII.
Ritter, E. L., and Wilmarth, A. L.: *Rural School Methods*, chap. IX.
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CHAPTER XVIII

TEACHING THE SOCIAL SCIENCES

Meaning of social science. The organized knowledge and activities of the universe are divided into two great fields; one of these deals with nature, the other with man. Each of these great fields is subdivided into many branches. In the first field comes astronomy, the science of heavenly bodies; botany, the science of plants; geology, the science of the earth; and physics, the science of force. In the second field, psychology deals with the mind of man, political science with government, theology with religion. All those subjects which are concerned with human institutions, social relations, and group activities are called the social sciences. The chief social sciences taught in the elementary and high school are history, civics, geography, economics, and sociology.

Only the first three are taught to any extent in the elementary school, although economics and sociology may be comprised in the other branches. History includes the social science of the past and the origin, development, and interrelation of events, movements, and institutions which are of significance in our life to-day. Civics gives us a cross-section of the present, embracing especially political, economic, and social phenomena. Geography is like civics in that it is a cross-section of the present, being chiefly concerned with a description of the relations between man and his physical environment. It also takes up a comparison of the customs and modes of life in different lands, and shows the inter-dependence of social groups.

The aims of social science. The basic aim of all social-science teaching is good citizenship. This term means very

much more than faithful voting, obedience to law, and honest service in office. It comprises all the social relations and attitudes of man: in the home, in business, in school; in the community, the State, the Nation, and the world. It requires an understanding of society as it is, ability to participate in its activities, and ability and willingness to improve the conditions of living. To understand, participate in, and improve society — these are the great aims in the study of history, civics, and geography. Since in most schools pupils are taught these subjects in separate classes, it is well to distinguish also the special aims through which the objective of citizenship may be realized. These aims may be classified as follows:

Special Aims in Teaching History

To give the students:

1. Knowledge as to how men have brought about improvements in conditions of living; the methods used, the chief obstacles overcome, the leading characters in the story of the past
2. A basis for formulating plans for the future progress of society
3. Knowledge of many items of information which make for a common basis of feeling and thinking
4. Such knowledge of facts as will protect individuals and groups from the demagogue, the ignorant and vicious leader, and the disturber of just relationships
5. Interest in history as a means of enjoyment
6. The ability to discriminate between right and wrong and between wisdom and error in human conduct
7. An understanding of the way in which present-day problems have arisen; a knowledge of which men have stood for certain public policies, and which men have stood against them
8. A sense of the duty of serving society to-day and making as large a contribution as possible to the welfare of future generations
9. An appreciation of our inheritance and of the efforts of the men of the past to transmit to us the best in their lives

Special Aims in Teaching Civics

To give the students:

1. Knowledge of the social and civic duties, rights, responsibilities, and privileges of a good citizen, and a willingness to carry out citizenship honestly and faithfully
2. Skill in the duties and habits that are appropriate to good citizenship
3. Understanding of the basic forms of social organization and of the social activities of one's own social groups
4. A conception of the relative value of type forms of organization and conduct in realizing the basic aims of democracy
5. Ideals and attitudes that function in guiding intelligent conduct
6. Continuous interest in social problems and continuous concern over social welfare
7. Willingness to subordinate selfish aims to the aims and interests of the group

Special Aims in Teaching Geography

To give the students:

1. Understanding of ways in which environment affects man and of how man in turn has modified his environment
2. Sympathetic understanding of other people
3. Acquaintance with useful facts concerning the production, distribution, and consumption of wealth
4. Interest in places, people, and travel, and the ability to make and use maps
5. Knowledge of the interdependence of men and of ways in which men can benefit through an exchange of ideas and products
6. Knowledge of the local community: topography, location, relations with other sections, resources, industries, and future possibilities
7. Interest in geography as a source of enjoyment through reading and study

Social-science materials. The above aims can best be realized through placing an increased emphasis upon the present, which means giving more attention to civics and geography, and less to history. New materials are brought

in from economics and sociology; less time is given to early, and more to recent history. As much time can well be set aside for studying the last fifty or sixty years of human history as is allotted to the whole preceding period. This division necessitates somewhat longer textbook assignments in colonial and revolutionary history and a more intensive study of the later national period. Studies in history, geography, and civics reveal some of the present-day needs of society. Dates, names of historical characters, important places, and civic problems occurring in magazines, newspapers, textbooks, political platforms, and legislative measures have been counted and their frequencies computed.

Local geography, local history, and community civics make up a constantly increasing proportion of the social-science curriculum. These materials are justified because they are interesting to children, are useful, develop community pride, and give acquaintance with scientific methods of study. They make teaching more real, promote learning, and give a basis for a better understanding of matter farther removed in space and time. There is no better way of promoting interest in the school community than through the study of community history, geography, and civics. There is also a growing tendency to teach all the social sciences as one subject. The reasoning is that the subjects are not separate and distinct in life and so should not be in the school. The practice everywhere to-day is to teach all the subjects as one in the first three grades, but in some of the remaining grades separate courses are offered in history, geography, and civics.

Sequence of material. After selecting materials, the next problem is to decide what shall be taught first, what next and so on. The practice is to begin with the subject near at hand — the home, the school, the neighborhood, the community. Such a live program of social activities gives

the children opportunities for participation. The sequence of studies is also determined by their difficulty, the method being to begin with the simple and easy and pass to the more complex. Anything is easy which is concrete, well analyzed, reasonable in amount, and satisfying to existing needs; anything is difficult which is abstract, complex, voluminous, and for which there is no felt need. This principle, again, suggests the wisdom of beginning with the community and going to the more remote sources.

Cause and effect are important elements in determining sequence. In geography, for example, the teacher might select such important causes as climate, location, and the character of the people, and show the connection between these and products, industries, wealth, government, and customs. Physical differences between the North and the South, and the different interpretations of the Federal Constitution, social inheritance, slavery, and religion are factors which are related to the Civil War as causes to effects, and these produced events which became in turn causes of a new series of happenings. In the local community, such a series can be traced in the building of roads, the improvement of schools, and the development of industries. Likewise, associating one person or event with another in time or place makes for ease both in teaching and in understanding.

Methods of teaching. Methods of teaching the social sciences have been variously classified as: (1) oral; (2) topic; (3) textbook; (4) review and drill; (5) socialized; (6) individual; (7) test; (8) study; and as numerous combinations of two or more of these simple forms. All these methods may be grouped under two broad general classifications. The first includes the analytical and detached types, which take up relatively small elements; the second is synthetic and unified, taking up large units. The first might be called the

method of parts, the second the method of wholes. The study of names, dates, products, duties of officials, boundaries of countries, latitude and longitude, and the hundreds of other like minor items represents the analytic method. The organized array of facts, figures, and reasons explaining a problem, accounting for a condition, or showing the course of a movement represents the synthetic method.

The synthetic method is basic in teaching social science. An entire unit of history, civics, or geography, as the case may be, should first be taught. The method is by telling, reading, acting, visualizing, outlining, or writing, or by combining two or more of these activities. A unit of social science means a natural experience, with sufficient explanation and description used in its setting forth to give it vividness and satisfy the children's interests and understanding. How to prevent floods in the Ohio Valley, how to obtain a supply of water for the irrigation of some western area, the nature of plantation industries in Colonial Virginia — these are all typical units. If the activities of the pupils are directed and motivated by a problem, the method is called a project; if the purpose is to show and explain the order of related events and conditions, the method is called developmental. Analysis is used along with synthesis to test, review, clear up minor points, amplify, and promote interest. Several subordinate methods may be used in a single class period. Some of the most important will be discussed in the pages which follow.

1. **The project.** The activities and results involved in the solution of a problem constitute a project. The outcome is problematical, and there is a challenge to the pupils to find the best solution. Projects are to be found everywhere in social life. Should a given city own and operate a light and power plant? Should the school district issue bonds for a new school building? Should the State levy a

tax on gasoline sales for the purpose of financing roads? Should our Government cancel the French debts? What factors account for the development of a given city? Why did slavery become institutionalized in the South? How was the Panama Canal built? What buildings and equipment are required on a large Western farm? All these are examples of projects.

The question form which the project takes is useful, for two or three reasons. First, it helps to limit the study to one definite issue. Second, it is a challenge to the pupils to find the best solution. Third, if the matter is controversial, the children are led to examine both sides, though after the investigation is completed and all the available facts are collected, the results may be presented as proving one side of the proposition. To illustrate, suppose a class were dealing with the problem: "Should the city of X own and operate a light plant?" Suppose the evidence should point to an affirmative answer. The facts should be organized to convince others in much the same way that a debater puts forward his arguments or a graduate student develops a thesis. No project is complete until proof is given. The proof may be read, acted, told, written, or put in the form of an exhibit; it must be fairly complete and accurate.

Project teaching. Most projects should originate with the pupils or arise in a natural way in school life. The pupils may easily be stimulated to search for projects. Every political campaign and every newspaper and magazine reveal scores of problems. Local problems should be given the preference. When a good list of present-day projects is located, it will be observed that the counterpart of the problems may be found also in the past. There are and always have been questions of government, health, transportation, commerce, war, education, wages, public improvements, voting, resources, industries, prices, fashion,

and, in fact, questions concerning everything that has ever existed. Correlation is always obtained through project work. There is no trouble in unifying history, geography, and civics, as may be seen from the following adaptation of the familiar Columbus Day project for second- or third-grade work:

1. Motivation. The approach of Columbus Day led to a discussion of his life and service. It was suggested that the class study his life and, on the anniversary of the discovery of America, present what they found.
2. Pictures of Columbus, of Columbus at the court of Spain, and of "The Boy Columbus" (Perry Picture Company) were obtained and discussed.
3. A program of things to do was planned:
   a. A representation, on the sand table, of the landing
   b. A pantomime of Columbus at court and landing
   c. A poster of the ships in mid-ocean
   d. Printing the letters "Sail On! Sail on!"
4. The points of the compass were reviewed; the route was charted and dramatized.
5. Civic suggestions were made:
   a. Flying the American and Spanish flags together
   b. Discussion of how we can show our appreciation of what Columbus did
   c. Americanization — What we can do for foreigners; what they can do for us.

2. The developmental method. The developmental method may be made clear by describing the work of a class in history. The subject for study was, "How the people of our State have developed their transportation system." The pupils first made a survey of transportation to-day, collecting facts, pictures, maps, and models. They next studied early means of transportation, noting the means employed, for what purpose they were employed, and when, where, and by whom. Much interesting information was obtained from older people in the community. The pupils

then followed the course of transportation development from the beginning and arranged the results in a large chart, adding such written explanations as were necessary. The result was that the class became well acquainted with the plan which their forefathers had developed and used; they knew why and how the transportation system of their own day had been devised.

The developmental method is broader and more inclusive than the project. It tends to bring in more related and associated facts and events. In dealing with transportation by the project method, there would be a tendency to omit such phases as: (1) descriptions of journeys; (2) hotel and tavern experiences; (3) equipment and luggage; (4) costs of travel and shipments; (5) permits and regulations governing travel from one country to another; (6) effect of transportation on education, cost of living, industry, tariffs, war, and so forth. The developmental method comes nearer to being the method employed by scholars than does the project. The facts studied may be selected because they are interesting and useful, or because they help to explain what the past was and what life is to-day.

This method may be used profitably in connection with textbooks in the social sciences. The class in history, for example, may study in order all the topics which bear upon such subjects as the making of the Constitution, American tariff policy, immigration, or the growth of public education. In civics, they may study from the developmental point of view county government, the commission form of city government, and the health work of the United States Health Bureau. In geography, the topics of lumbering, manufacture of flour, rainfall and agriculture, and many others may be worked out in the same way.

3. **Drill.** Repetition is necessary in order that what has been learned may be retained. The amount of repetition

necessary in studying the social sciences differs with the subjects — civics demanding the most, history the least. Civics has for its main objectives the learning of certain habits and skills as well as ideals and special ends, while history is taught chiefly for its ideals and aims. Geography occupies a middle position between the other two. In this branch some skills are desirable — as, for example, the ability to read maps quickly and accurately, measure distances, and tell directions. Most of the drill in civics should come in the early school years, when social science is taught as a composite called citizenship. At this time, a persistent effort should be made to inculcate in pupils habits of cleanliness, punctuality, truth, honesty, industry, tolerance, coöperation, health, the care of property, the wise use of leisure.

Certain items of information should also be memorized — dates, names, events, duties, and locations. These, too, require drill, but it should be a working principle not to have material memorized or habituated just for its own sake or because it is in the textbook. The drilling should be justified by the fact that the material will prove useful immediately or in the near future. Various devices may be used: (1) half the class prepare questions which the others answer; (2) competition in answering questions is carried on between rows; (3) the names of places are written in on maps; (4) places are located on a large map by pointing; (5) names are guessed when the teacher gives the first letter; or (6) questions are asked that require one-word answers. The teacher will do well to put into effect these ten short rules of drill:

1. Make the first impression which is to be drilled on later, clear, definite, and interesting.
2. Test before drilling and practice only what is unlearned or imperfect.

3. Make adequate preparation; go into the drill with enthusiasm.
4. Motivate by games, competition, and approval.
5. Hold the pupils' attention, and when it begins to fail, stop.
6. Make the drill periods short — not more than five minutes.
7. Continue as long as is necessary having the periods; do not give them up before the habits are fully formed.
8. Drill only those pupils who need drilling; excuse the others.
9. Try to find out the cause of any failure.
10. Have the pupils recall, at long intervals, materials previously learned.

4. Reviews. Reviews have a more important part to play in social-science instruction than does drill. They differ from drill in the fact that longer intervals occur between exercises, in the type of the exercises used, and in the psychological processes that are involved. In drill, the pupils repeat with attention what has been learned, exactly as it was learned; no new element, information, or skill is brought in. In reviews, on the contrary, the purpose is to give a new point of view in regard to the principle or central idea in matter previously taught. The purpose of drill is to fix old responses and make them automatic; the purpose of reviews is to revive old connections and make new ones. Drill is mechanical and requires a large element of motivation; the interest of reviews may lie in the satisfaction that the children get out of the material itself.

The nature of review work in social science may be illustrated as follows: Suppose the class in history has read the textbook account of the surrender of Yorktown. The main facts and impressions have been acquired. The repetition of these facts is drill. Suppose, however, that the pupils read, in addition to the text, a story describing the surrender, see a motion picture covering the event, read an account of the first-hand experiences of a soldier of the time, read other histories, and listen to the story as told by the

teacher or a pupil — this is review at its best. The chief rules of effective social-science review work are:

1. Use a method that will permit the covering of a large amount of material in a short time — easy reading, interesting stories, drama, pictures, or debate.
2. Give attention to the most striking and interesting parts of the study.
3. Do not combine drill and reviews.
4. Keep the factor of enjoyment well to the fore; avoid enforced, tedious, and unduly long periods.
5. As far as is possible, make reviews voluntary and independent of outside suggestion.
6. Do not have the pupils take notes, answer questions, or write summaries of the review, nor otherwise combine the methods of initial learning.
7. Introduce variety in both methods and materials.

5. The discussion method. The discussion method of teaching possesses several advantages. Opinions are expressed and ideas and information are exchanged. Child activity replaces teacher activity. The abilities of all are combined in making plans and solving problems; the pupils learn the benefits of coöperation and of division of labor. The conditions are much like those in everyday life. The children learn to face situations that are like those which they will confront later in the broad field of community affairs, and to deal with them by the same methods they will then use. Many good qualities may be developed — courtesy and tolerance, for example, fair-mindedness, and public-spiritedness. The discussion method is quite effective in stimulating pupils to make preparation, since they cannot participate unless they have something to contribute.

The method will work in the lower grades about as well as it will in the higher classes. The writers have watched a very interesting little experiment in a third grade in which the teacher permitted her pupils to discuss any topic they

pleased, she herself leaving the room during the fifteen-minute period. Stenographic reports show that the discussion is on important topics — science, health, games, the care of pets; books, movies, travel, scenery, transportation, local celebrations, and a vast number of similar subjects. For a proper management of discussion:

1. A chairman or leader should be appointed. Each pupil should have a chance to act as leader.
2. A little explanation of the usual courtesies should be given by the teacher. She should stress the importance of using simple parliamentary rules; the need of giving helpful rather than critical suggestions and of having respect for the views of others; the importance of having accurate information and of employing facts rather than opinions, the value of brevity, of sincerity, of willingness that all should be heard.
3. Textbooks and reference materials should be at hand for ready consultation.
4. No one should be allowed to monopolize the discussion.
5. The teacher should keep in the background as much as possible.
6. The pupils should select the topics for discussion.

Directing study. The method of study will vary with the purpose of the teacher and with the class. It may consist of project activity, memorizing, reading for enjoyment, preparing exhibits, making charts, or of many other exercises. The assignment should indicate the kind of study expected and the materials available, and should give the motive and the purpose of the work. This is what is meant by saying that it should be definite. When reference is made to matter in a book it saves time to give explicitly the title of the book, the name of the author, and the proper chapter and page. To illustrate some of the main points — suppose the class were taking up the study, by the developmental method, of transportation. The main type of study might well be reading, the motives and purposes being as follows:

1. *Curiosity:* To find out the means of transportation used in the past, the nature of the devices used, how the methods affected the lives of the people, and how satisfactory they were.
2. *Practical aims:* To learn how we may profit by past experience, and to check up on methods in use to-day to see whether they can be improved in type, management, control, finance, and operation.
3. *Desire for information:* To learn names, dates, duties, and places, and to connect them with events and activities.

The preceding paragraph emphasizes one point often made in social-science teaching — namely, it should be the rule to make long assignments. A week, two weeks, or a month may be given to completing the subject of transportation. Its historical, civic, economic, geographical, and social aspects may be treated. After the subject and the motive for studying it has been made clear, the sources of information or other help should be indicated. These sources are: references to supplementary books, surveys, maps, literature, personal interviews, and anything else available.

The next step is to indicate how the sources should be used. Are the pupils to read? Are they to read in order to answer questions? To take notes? To make outlines? To learn word meanings? To construct exhibits, or for what purpose? This is a part of the assignment which should be as well understood as what the subject of study is to be, for it is in this activity aspect that pupils commonly need help. Until they become skillful in the study process, the teacher should give the proper directions and have them carried out under her supervision. In this way she can see not only that the pupils study, but that they study according to a well-defined method. It is worth while to take the so-called recitation period many times for just this purpose. In the study period, the teacher should correct errors, give advice, help find materials, give encouragement, check

results, and in every way try to improve and further the children's methods. This is the very essence of supervised study, and the main point in the laboratory method.

The four steps in the assignment-study method in the social sciences may be conveniently summarized as follows:

1. Select a large unit for study, and subdivide it into convenient minor divisions for immediate use. Motivate these units.
2. Indicate the sources of information to be used.
3. Show what activities the pupils are to engage in — reading, writing, dramatizing, building, etc.
4. Teach the pupils how to perform these activities efficiently.

Some types of social-science material lend themselves very well to home study. Examples are geographical readers, supplementary histories, source books, poetry and fiction, and the easier texts in civics and industry. Lessons that require close application, such as map study, memorizing names, learning the duties of officials, and, in fact, most textbook assignments, should be studied at school. The modern practice is to reduce home-study assignments to the minimum while at the same time encouraging children to read voluntarily the most interesting books, stories, and magazine articles in the field. Constructional work, such as making pioneer cabins or plaster-of-paris relief maps, clay modeling, play writing, and similar activities, may be done outside of school hours and at home.

Supplementary devices. Social science should be made a vital subject. If it does not mean a great deal in the lives of children now, it will not be of much value to them in the future. Therefore the teacher should put forth her best efforts in teaching this group of subjects. It is an amazing fact that children often dislike history and civics, and that in many schools geography is equally unpopular. The dislike may usually be traced to one of four causes: (1) remoteness from immediate interests and needs, (2) overemphasis upon the

abstract (laws, duties, and causes), (3) lack of organization, and (4) monotony, or sameness. Overcoming these objections is a function of the supplementary devices mentioned here, namely:

1. Study of the present
2. Visualization
3. Use of materials that are naturally interesting
4. Establishment of relationships
5. Introduction of variety

1. Study of the present. The present may be studied in two ways: (1) by direct observation of the life roundabout, and (2) by reading the record of the present in books, newspapers, and magazines. The first method is excellent in beginning geography, and can be used continuously in civics. To a limited extent it can be used in local history; every child should learn something about the origin and development of his community. Field trips and excursions should be made now and then to places of special interest: to the courthouse, a farm, an industrial plant, a post-office, a mine, a lake, a mountain, or a stream. It should be the work of the teacher to:

1. Indicate in advance what is to be observed
2. Direct observations at the time to the most significant things
3. Suggest supplementary material which can be read
4. Participate in later discussions
5. Correct any misconceptions and errors

Current publications. Current publications are the basis of the second method of studying the present. Every school should have available a local newspaper, a state newspaper, a national newspaper, and a few magazines of general news value. To this collection should be added some of the free bulletins and leaflets which may be obtained from the United States Bureau of Education, the United States Department of Agriculture, the State Agricultural College,

A Visit to a Fire Station to Teach Civics

and other public institutions. There is much useful and valuable free matter put out by different organizations, as, for example, railroad folders and schedules, steamship advertising, commercial-club literature, and booklets from manufacturing companies.

The worst mistakes in handling current events arise from a lack of a sense of values. Pupils do not know what is important; they tend to waste their time on trival day-to-day events. In a class in current events recently visited by the authors, pupils were reporting with great solemnity on such topics as "Man Falls into a Well," "Tractor Destroyed by Locomotive," "Hold-up Men Take Victim's Watch," and "X University Wins Football Game." Such happenings have no significance when standing alone, and some of them none in any case. An event is likely to derive its significance from its connection with others in a series. Thus if the destruction of the tractor was one of a number of accidents at a grade crossing, it might be significant in emphasizing the need of overhead crossings, subways, signals, watchmen, and other precautions. With any event reported its past history and probable significance in the future should be considered. Examples of items from the news of to-day that do possess educational significance are:

1. Farm-relief measures
2. Over-supply of cotton
3. Forest fires
4. Chinese animosity to foreigners
5. War of the League of Nations against disease
6. Proposal to level the tariff wall

Some hints on teaching current events are:

1. Have the pupils bring newspapers to school with them, and teach what to read in the papers and how to read it.
2. Have the children collect clippings on various vital topics. Put the clippings into envelopes, or mount them in scrap books for later use.

3. Have pictures, cartoons, and charts collected and arranged the same way.
4. Have reports written covering the clippings on a given subject for a long period — two weeks, a month, or a year.
5. Set the pupils to find every week something new in history; something in geography and civics that is not in the textbooks.
6. Assign topics for continuous study during the year, having each pupil collect as much material as possible, others helping him. Typical topics are:

Roads	Playgrounds	Parks
Advertisements	Amusements	Churches
Living expenses	Labor	Health
Education	Industries	Wages
Science	Libraries	Public improvements
Politics	Taxes	Law enforcement

2. Visualization. Visualization makes for learning. First of all, it adds to the vividness of an idea or perception — an essential principle in initial learning. A dull account of the voyage of Columbus has not nearly so great learning value as a skillful dramatization of the main events of that voyage. Second, visualization makes possible the teaching of many things that cannot be taught at all through language. A model of a Spanish mission or of a Mexican hacienda, a map of the Canal Zone, a picture of a water front, a diagram of geological strata, a movie of feudal days, a chart of the commission form of government — these may be made to teach, economically and clearly, what a book cannot teach. The possibilities in the method may be suggested by considering a few of the many ways of visualizing history:

1. *The sand table*
   - *a.* Indian village: materials, leaves, sticks, bark, grass, stones, moss, dolls
   - *b.* Colonial town: forest, prairie, houses, fort, palisades
   - *c.* Holland — canals, windmills, cows, pastures
2. *Pictures and diagrams*
   - *a.* Magazines and newspapers

b. Cartoons, charts, and graphs
c. Pictures (Perry)
d. Maps
e. Scrapbooks

3. *Construction and collections*
a. Furniture, houses, forts
b. Stamps
c. Mats, baskets
d. Tools and implements: bows, arrows, ploughs
e. Mounted pictures

4. *Dramatization*
a. Local history pageants
b. Celebrated characters
c. Great events
d. Special days

3. **Interesting materials.** Teachers should make the most of materials that are naturally interesting, even if it means bringing in something not otherwise important. This point is supported by a well-known psychological theory — the conditioned reflex. In the basic experiment, the experimenter gave food to his dog, ringing a bell as he did so. Later on, the ringing of the bell started a flow of saliva in the dog's mouth though food was not present. We know a certain man who calls his dog to him only to administer punishment; whenever the man calls, the dog begins to whimper, because he has so long associated the call with the pain of being whipped. Likewise, children have associated the social-science recitation with unpleasant experiences — memorizing dates, learning the proceedings of legislatures, the thoughts of political leaders, and the mathematics of space, enumerating place names, hearing rules and regulations repeated — until at length the mere mention of the subject causes an unhappy attitude.

This difficulty should be overcome, as soon as possible, by the use of proper materials and methods. Children like

tales of travel and adventure, accounts of the exploits of heroes, descriptions of customs and fashions — in short, action rather than theory. They take more interest in men who explore, build, and fight than in men who think and legislate. They would rather read about blockade runners in the Civil War than about the efforts of the Secretary of the Treasury to raise funds. Pioneer clubs, local-history clubs, special-day celebrations, congresses, story hours, and the various methods of visualization are good means for reënforcing interesting reading.

4. Establishing relationships between parts. Another complaint against social science is to the effect that it deals with fragments and parts. As in the case of the current-events study previously cited, one phase or event is not connected with others. This way of studying taxes the memory unduly and leaves the phase or event meaningless. Overemphasis upon the analytic method of teaching is quite certain to result in having a disconnected, unorganized mass of materials. The remedy is to teach mainly by the synthetic method: giving much attention to projects and developmental work and little attention to questions and answers and minor topics. One way to bring about improvement is to organize all related events in a series; for example, to have the children read consecutively everything in the textbooks on marketing, tariffs, the government of cities, political parties, or the bettering of elections.

The next best aid to improvement in this matter is the outline, wherein the important ideas under inspection are shown in their logical order. Some one has said that he can understand whatever he can outline, and the statement is very significant of a general attitude. Pupils should from time to time outline what they have studied in their texts and supplementary books. The third way to show relationships between parts is by means of diagrams. A simple

block or line chart of the national, state, or city governmental organization is more intelligible than are many pages of description. The idea can likewise be turned to account in explaining a bank, the feudal system, a school system, a great industry, and in many other ways.

5. Variety. There are enough method-types to enable a teacher to introduce variety into her work from day to day. Questions and answers become tiresome when used continuously; pupils may be bored by project work if they have no relief from it. It is better not to rely for success upon any single teaching device. Pupils differ, materials differ, purposes vary, and the interests of the teacher change. Not only should basic methods be varied, but, even in the same recitation, it is well to have variety. The plan may be: first, two or three minutes of drill; next, five or ten minutes of topical recitation; then a few minutes of reading or story telling; then four or five minutes given to visualization; and the period closed with a brief summary of the day's work. No pupil is likely to be bored by this procedure.

A lesson plan. This lesson plan,[1] which deals with the origin of the alphabet, will serve to illustrate how history may be taught:

UNIT OF INSTRUCTION: Our Alphabet
TEACHER'S AIM: To give the children an idea of the debt we owe to people of the past
PUPILS' AIM: To learn about the origin of the alphabet
INTRODUCTION: To-day instead of studying people, we are going to study about something that we use every day.

a. What do we do most in school? (read and write)
b. What do we read and write? (words)
c. Of what are words composed? (letters)
d. What name do we give to our whole group of letters? (the alphabet)
e. Let us try to make up a definition for an alphabet.

[1] Prepared by Wenda Croissant, State Teachers College, Chico, California.

f. Do all people use the alphabet we use?
g. Where did our alphabet come from?

PRESENTATION: The teacher tells the story of the alphabet, using the following outline:

a. Definition of an alphabet
  1. The fact that people needed to simplify the transmission of knowledge and ideas
b. The fact that the first real alphabet originated among the Phœnicians
  1. Who the Phœnicians were
  2. Where they lived
  3. Who their neighbors were (Egyptians and Hebrews)
  4. Where they obtained much of their alphabet (from neighbors)
  5. Mode of life of Phœnicians (seafarers and traders)
  6. How the Phœnicians carried the alphabet to other people
c. Changes made in the alphabet in the course of time
  1. In the number of letters
  2. In the form of the letters depending upon the instrument used in writing
  3. In pronunciation
d. Stages in the development of the alphabet
  1. Pictures of objects
  2. Pictures of ideas
  3. Initials of words with pictures
  4. Final form
e. The adoption of the Phœnician alphabet by the Greeks
  1. Division into the Eastern and Western types
  2. Transmission of the Western alphabet to the Romans
  3. The facts that our alphabet was copied from the Romans and that it has almost the same order as the Phœnician alphabet

SUMMARY: When the story has been told, the children write or tell as much of it as they can.

ASSIGNMENT: To-morrow I want each pupil to have a short report on some one thing about the alphabet. For example, you may look up one of the letters and report on it; or you may find out all you can about the Phœnicians: how they lived, dressed, earned a living, or anything that they did. The best books in which to look for these things are (write on board):

An encyclopædia
The *Standard Dictionary of Facts*
The *Book of Knowledge*
Any history of ancient times

Measuring results. Teachers differ as to the function of tests and examinations in social science. Some use them as incentives, some as learning exercises, and some to supply a basis for school marks. Types of tests for each of these purposes are as follows:

1. *Incentives:* A list of one hundred questions posted, a small number being taken for testing; self-testing and charting score on items taken from the daily assignment; competing for the highest score on true-false tests.
2. *Learning:* The essay test has great learning value. Exercises that begin with "Explain," "Describe," "Write," "Discuss," "Compare," "Outline," "What," "How," "Trace," and "Why" are best, in the order given.
3. *Marking:* For marking tests, only the true-false, multiple-choice, best-answer, matching, and completion tests are recommended. (See Chapter VII.)

Standard tests. When comparing the achievement of the pupils of one school with that of the pupils of another, it is necessary to use standard tests. They may be purchased for a few cents each from the research bureaus of teachers' colleges and universities, or from the publishers direct. (See Chapter VII.) They should be given at the beginning of the year and at the end of the year, in order to check the amount of progress made. The directions, which are always included with the tests, should be followed without any variation. Inasmuch as in this field new tests are continually appearing and old tests being improved, it is a good idea to find out from an expert (the head of the research bureau in the nearest teachers' college or university) what are the best tests for the purpose in mind — a principle

which applies to testing in all subjects. The best tests now available include:

Gregory tests in American history
Barr Diagnostic Tests in American History
Gregory-Spencer geography tests
Courtis supervisory tests in geography
Brown-Woody civics test
Chassell-Upton citizenship test (more useful as a teaching guide than as a standard measure)

Summary. Social science comprises history, civics, and geography. The main objective in teaching it is to train pupils in citizenship. The trend in these subjects is toward placing a greater emphasis on the present, using materials from life, enlarging of community interests, and the unifying of civics, history, and geography in a single course. There are two chief methods of teaching social science: the synthetic, or method of wholes, and the analytic, or method of parts. The former should be chiefly relied upon. Supervised study is highly desirable, with attention given to the selection and the statement of the problem, with reference furnished to materials and sources, and with study directions and supervision provided. Supplementary devices include current events, visualization, interesting materials, variety in methods, and organization. The object of measurement is to furnish an incentive in study, to make for learning, and to provide a basis for marking.

EXERCISES AND PROBLEMS

1. Since all the social sciences are to be treated in a simple elementary way in the grade school, and since all have a common objective, is there any justification for separating them into their different branches, such as history, civics, and geography? Discuss.
2. Examine a text in each of the above three fields, and find as many examples as you can of duplication of materials.

3. What reasons can you see for putting a larger emphasis upon the present in teaching social science?
4. Name some desirable habits which it is the function of civics to form. Some ideals that the study gives. Some items of knowledge. Which of these three is the most important in relation to the main objective, citizenship?
5. In a certain civics class, the teacher required the pupils to memorize the Constitution of the United States at the rate of two or three clauses or sections a day. The method of recitation was to have each repeat what he had memorized, and to follow this up with questions on the meaning. Did this teacher use the synthetic or the analytic method? Can you make any suggestions for the improvement of her technique?
6. Examine the textbook in history which is in use in your schools. To which method of teaching is it best adapted? Does it put undue emphasis upon questions and answers? Could the developmental method be used with this text? Check up its treatment of some important subject, such as education, transportation, or finance. Is the treatment adequate? Clear? Interesting? Not too difficult for the grade of pupils for which it is intended?
7. Go through a modern text in geography, noting the opportunities that it offers: (1) for teaching through dramatization, (2) for visualization, (3) for satisfying child interests, and (4) for introducing variety. Summarize your findings.
8. What is included under supervised study in social science? Illustrate what is meant by saying that an assignment should be definite.
9. Make up a short list of current publications which you would endorse for use in teaching current events.
10. Make up an objective examination in one of the social-science branches, and be prepared to defend your choice of form and of items.
11. Prepare a lesson plan based upon some interesting social-science topic.

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CHAPTER XIX

TEACHING THE NATURAL SCIENCES

Importance of the natural sciences. David Starr Jordan defines science as experience which has been tested and set in order. There is nothing unusual or mysterious about science; it is classified knowledge. When this organized truth is related to the world of nature it is called natural science; the natural sciences embrace all that is known about animals, plants, mechanics, magnetism, electricity, light, heat, sound, the heavenly bodies, weather, land and water forms, rock, soil, and materials. In teaching the natural sciences the method is to bring children into direct and intimate contact with all the common things of nature that lie around them. The purpose is to make known to them those things most worth knowing in order that they may find life well worth living. In the study of science, nature, not books, is the real source of knowledge.

No one can appreciate or fully utilize the natural sciences, however, without special training. It is necessary to learn which of the plants and animals of the neighborhood are beneficial, and which are harmful; which should be cared for and cultivated, and which should be destroyed. Just as they are taught to appreciate the beauty that is in art and music, so they should be taught to appreciate the great outdoors with its hills, streams, and rocks — a world made more beautiful by birds and trees and flowers. The toad, "ugly and venomous," becomes fascinating when properly understood. Thus a new value is lent to our heritage in the applications of science; trains, aeroplanes, automobiles, telephones, telegraph, radios, moving pictures, phonographs,

musical instruments, industrial machinery, and the hundreds of labor-saving devices on every hand are the products of science. Because modern science is the most important single factor in our lives to-day, it should be particularly well taught in the public schools.

Present conditions. Although science is the most important of all elementary-school subjects, less time is given to it and it receives less attention than any other. Although its importance has been steadily increasing, the business of teaching it is more generally neglected now than was the case twenty years ago. Spelling is accorded about three times as many minutes on the daily schedule as is science, language eight times as many, and reading eleven times as many. Notwithstanding the great practical value of science, its large contribution to the joy of living, and its natural appeal to the curiosity and interest of children, the teaching of it has been nearly a complete failure.

Several explanations of this may be given. The importance of nature as a school subject has not always been realized; a good many people have regarded its use in school as a fad. Still others have thought that children should be able to pick up sufficient scientific knowledge incidentally from their out-of-school experiences. Some have believed that natural science could be taught best in correlation with other subjects, and have minimized its place on the school program until finally it has been crowded out by other materials. Then again, there is some fault to be found with the way in which it has been taught. Many teachers have had no preparation for teaching science, a few have disliked it, and many more have taught it in an emotional and sentimental sort of way which has made people lose respect for it as a school subject. At no time, except in a few schools, has the subject been given the prominent place that its importance makes it deserve.

Aims of science instruction. One of the earliest writers on elementary-school science defined it as primarily a study which cultivates the powers of observation and puts the child in sympathy with outdoor life. A little later it was held that the purpose of science is to relate the education of the child directly to the life that he is to lead, thus making him stronger and more resourceful than he would otherwise be. A third writer, with a psychological bent, maintained that the study of science should lead the child to look things squarely in the face, to get at genuine values, and to be moral from principle; while modern courses of study put much stress upon the interest and the recreational possibilities in the field. These considerations lead us to name the three principal aims of science instruction in the elementary school as follows:

1. To provide useful scientific knowledge
2. To give practice in scientific methods of thinking and working
3. To help the child utilize and appreciate the recreational possibilities in science

1. Useful scientific knowledge. Scientific knowledge is useful in helping a person in his social and civic relationships, in making him a wise consumer, in freeing him from superstitions and prejudices, and in making him generally well informed. With regard to the first use, it is realized that much social and civic evil is caused by ignorance. Boys who rob and destroy birds' nests, who kill birds and toads, and who destroy flowers and shrubbery usually fail to realize the extent of the harm they are doing. The ruthless destruction of our forests, the depletion of the soil, and the exhaustion of the fisheries cannot be traced wholly to selfishness; some of the mischief is owing to downright ignorance.

Intelligent game laws and, in fact, all conservation legislation depend for their efficiency upon scientific knowledge.

The good citizen should be able to discriminate between the useful birds, plants, and animals which merit his protection, and the injurious insects, weeds, bacteria, and animals which are public nuisances. Spreading the knowledge of the value of trees, shrubs, and flowers is the best way to safeguard them against wanton destruction by careless campers and pleasure-seekers. We cannot adopt an adequate program of water-power development, irrigation, forest conservation, or a public-park system without the coöperation of citizens who understand the reasons back of the plans.

Science and the consumer. Every one is a consumer, and every one needs to know something about the supply of necessities and comforts which he uses. There are many useful facts to be known in regard to foods, clothing, dwellings, and labor-saving devices for the home. There is much practical value in knowing something about building materials, furniture woods, paint, and metals. Lighting, heating, and ventilation are also practical scientific problems that all should study to at least some extent.

Investigations have proved it is along just these lines that people are most ignorant. They buy expensive foods that have scarcely any value for the body. They pay high prices for clothing of inferior quality, thinking they are getting the best. They contract diseases because they are unfamiliar with simple facts about the spread of bacteria. They do not know how to light and ventilate their houses properly. Unacquainted with the mechanism of simple household devices, they operate them ineffectively, or spend large sums for repairs which they cannot make themselves. They know little about the action of cleansing agents on dishes, woods, metals, and fabrics, and still less about the conditions of plant and animal growth, and of the harmful action of some drugs and patent medicines. Their ignorance of simple scientific matters probably taxes them at a higher

rate than do all the schools they may help to maintain.

Science and superstition. Superstition and prejudice are also the results of ignorance. The number of superstitions in which people believe is astounding. In a recent investigation over four thousand of such beliefs were found in active form among the people of a certain State of the Union. In a more recent investigation conducted among college students, only five per cent of the students claimed to be wholly uninfluenced by superstition. The probabilities are that the actions of one out of every three people are affected by it, and that one out of every two is affected at least emotionally. Fears, impulsive and foolish action, and weakness that puts one at the mercy of the unscrupulous plunderer are the results of superstitious beliefs.

The laws of nature leave no place for angry demons and ghosts, nor for rain-makers and fortune-tellers. The facts of nature give an orderly revelation of the powers of the universe that leaves out of consideration signs, warnings, portents, jinx, mascots, and dream interpreters. Natural explanations are not lacking in interest. Even a pre-school child wonders why it rains, why it snows, and why the moon shines, and the answers to such questions can be made as attractive as fairy tales. When we can get people to the point where they will doubt the efficacy of tapping on wood, crossing their fingers, looking at the moon over the right shoulder; when they no longer fear a black cat, a death watch, or a dog's howling, we shall have made material progress as a race toward sensible living.

2. The scientific method. The habit of scientific thinking and working is fully as important as scientific knowledge. It is first of all the method by which new discoveries are made and new knowledge is brought to light. In the second place, the success of civilization itself depends upon the ability of people to think scientifically. We need to be able

to tell the difference between facts that have been proved and tested and the so-called authoritative opinion. We should recognize that a majority vote, public opinion, or the opinion of some prominent person does not make truth.

Authoritative opinion insisted, until four or five centuries ago, that the world was flat. Galileo proved that the earth moves, but bigoted ignorance forced him to recant on penalty of death. Science never persecutes, science never burns old women in the belief that they are witches. Aristotle's opinion that a five-pound ball would fall five times as fast through space as a one-pound ball was accepted as a fact for nearly two thousand years. Mediævalists taught that a woman had fewer teeth than a man because Aristotle said so. A teacher of the time reported to his class that the leaf out of Aristotle's writings which told the number of a horse's teeth had been lost, and lamented, "Now we shall never know how many teeth has a horse." Those days were long ago, but even in this century there are plenty of people of unscientific attitude who would rather accept apparent authority than truth.

3. **Recreational opportunities.** Science provides unlimited possibilities for recreational activities. It makes a great variety of appeals. "To him who in the love of Nature holds communion with her visible forms, she speaks a various language." We enjoy tinkering with mechanical devices, rearing pets, making a garden, taking walks in the open country, studying birds, collecting flowers, and many other activities in which natural science is involved. There is room for any number of experiments in plant and animal culture, and the field of invention is free to all comers.

Opportunities are always available. In the country, the whole book of nature lies open for whoever wants to read it. In the city, there are parks and aquariums, and the hundreds of applications of science in machinery. The study of

science has the advantage over some other studies in that it provides free pleasure:

> No price is set on the lavish summer;
> June may be had by the poorest comer.

No one ever becomes too old to find pleasure in nature; as in the ancient myth of the giant, Antæus, health and strength come from contact with Mother Earth.

Children's interests in science. Scientific materials can only contribute to the realization of the foregoing aims if they interest the children. In the elementary grades it has been found that children have their strongest interest in animals, with plants next in order of interest, and physical facts third. In the lower grades, their chief interest is in the appearance of animals and the sounds made by them. In the upper grades, the liveliest interest is in what animals do. Interest in the identification and classification of animals and the learning of their names comes last. Their questions about animals have to do with insects first, then birds, and then mammals. Most of the questions in regard to plants are concerned with wild flowers; then come questions about trees, then questions about garden plants. In physical materials the greatest interest is in machines. At the bottom of the list come interest in geography, in geology, and in astronomy. What, how, and why is the natural order of science questions among school children.

Reading and stories in science should be based upon real facts of animal and plant life, because children prefer this kind, and because it is more valuable than fiction about nature. The real life of the spider is more gripping than the story of the spider that said to the fly, "Come into my parlor." To tell children that animals cannot talk and then give them a story in which animals do talk does not increase their confidence in the teacher's veracity. The

myths about ostriches burying their heads in the sand and Eskimos drinking oil do not make the ostrich or the Eskimo more interesting, and are far from the facts. The fact that the average person is likely to be fairly ignorant concerning rocks, rainfall, wind, water, heat, light, clouds, insects, plants, and birds is sufficient reason for satisfying the interest that children take in their natural environment by giving them the truth.

Motivation of science. Motivation of a study consists in connecting the instruction with the children's past experiences, making it interesting through variety and vividness, and putting it to use. Science, therefore, is one of the easiest subjects to motivate. It permeates the immediate environment and experience, it has an inherent appeal, and its uses are definite and easily shown. We can illustrate the principles of motivation in no better way than to quote from the experience of a rural teacher. She says:

> The trip up the river was a real pleasure to us. It was a dry year and the water showed only here and there. We made a little study of its flow in places underneath the sand in the dry season. Many of the large trees along the banks were dead because of the long drought. Notice was taken of such varieties, and of those that did not seem to suffer from lack of water.
>
> About March there came a very heavy rain. The river overflowed its banks and became a raging torrent, bringing down trees several feet in diameter, which had been washed out by the roots. This was a good time to talk of the wind and the rain and their effects.
>
> After the rain one could almost see the grass grow. How the children loved to tell where they had seen "nice green places"! We noticed the location and kind of soil where the grass started first. As soon as any blossoms could be found they were brought to school. An account or calendar was kept, with the date and name of each flower that was brought in. The name and something of the life of each plant were learned.
>
> One spring day the children asked why the ants did not keep their wings. They were fond of watching these little creatures at

their work. This was the time to take up the study of ants. We found out why they had wings at this time of the year and what became of the wings later. We watched them at work, and talked of their nests with the three kinds of occupants — nearly all workers — and of the care that was taken of the queens. We examined some individual ants under a magnifying glass and talked of their different parts.

The father of one of the children cut down a bee tree and got some honey from it. Of course we studied the usefulness of bees and the care of them. One great luxury of the place consisted of many wild berries: thimble berries, blackberries, gooseberries, and strawberries. We watched the bushes, taking note of changes from week to week.

One day one of the boys made a great discovery. He had seen protruding from the top of a very tall, hollow tree-trunk down by the river, the head and ears of an owl that was sitting on her nest. The tree-top was watched closely, and by and by vigilance was rewarded by the sight of a family of downy little owls. This led to the study of the owls common to the district. The usefulness of the owl, owing to its food habits, was especially emphasized.

This section of the country was rocky, so we studied rocks. Across the river from the schoolhouse there was a hill that looked as if it had several white fences running over it. The children explained that the white marks, instead of being fences, were ledges of quartz. One Saturday, some of the older pupils and I went over there and studied the rocks, bringing home many specimens.

As caterpillars became thick on the willows, we went to the trees to observe them. We talked of their covering, their color, their soft bodies, their segments, horny heads, jaws, and feelers. We noticed their manner of crawling and climbing. We found out which species were harmful and which were useful. Some were taken to the schoolroom and placed in a glass globe for observation. The children cared for them, giving them fresh leaves every day. How they watched for the metamorphosis!

These lessons indicate that there is no lack of subjects or of enthusiasm for science in any neighborhood:

> "Why should I read what man has penned,
> His speculations without end,
> When here the book of nature lies,
> Open to all her children's eyes?"

Method of teaching. The methods of teaching science should be in harmony with its aims, and this means that methods employed in teaching other subjects will not be satisfactory. There should be no formal drill; instead, the pupils should derive their facts from the study of real materials. If books are used, it should be after the examination of the actual materials in the form of leaves, flowers, roots, trees, soil, insects, birds, and so forth. Isolated facts will be of little use, but an attempt should be made to discover characteristics by which one species, family, and class may be distinguished from another. This will mean giving special attention to likenesses and differences.

It will help, too, if the teaching method is such that any assignment constitutes a problem; and finally it is advisable to combine the problems into a series, all having to do with the same general subject, and all related in such a way that the solution of one problem leads to the solution of another. Suppose, for example, that the big general unit of study is how the plant grows. The first problem in the series may be the planting and germination of the seed, the second may deal with its food, the third with its growth and structure, the fourth with its production of seed, the fifth with its enemies, the sixth with its uses, and so on. It is important to remember, however, that each succeeding problem should grow out of the past experiences of the children, and that it is better to sacrifice the logical organization of a subject than to lose the interest of the children. As illustrations of method, there follow several outlines of units suitable for the elementary-school classes in science:

Elementary-School Science Units

Unit I. To become acquainted with some of the more interesting factors in the immediate environment

1. Class activities:

a. Bird study. Learn to recognize and protect birds that

eat weed-seeds, those that are insect destroyers, and those that are scavengers. Note size, color and markings, songs or calls, habitat, nests and eggs, and enemies.

b. Insect study. Find evidences of destructive work of insects, and study life history, noticing development from egg to adult form. Observe feeding habits, noting whether they bite or suck. Learn how to destroy insects by keeping premises clean, and by spraying. Protect such insect enemies as lady bugs, wasps, and birds. For supplementary exercises make insect collections, life-history mounts, and insecticides.

c. Wild flowers. Study the common species, noting form, color, habitat, growth and development, seed, dispersal of seed, enemies, and structure of flower, stem, leaf, and root. Observe protective features. Note whether harmful or not, and learn methods of control.

2. Standards of attainment:

a. Be able to recognize ten common birds, ten wild flowers, and ten insects.

UNIT II. To prepare an Arbor Day program, and to inculcate a love of nature in children

1. Class activities

a. A field trip to a park, grove, or woodland, observing kinds of trees and learning their names. Take account of form, size, leaves, bark, fruit. Mount twigs, leaves, wood, and seeds.

b. Collect, sketch, mount, and name plants known by the pupils, for exhibit.

c. Write compositions on wild flowers, shrubs, trees, weed extermination, and similar subjects, to be read on Arbor Day.

d. Memorize nature poems to be recited by the smaller pupils. Prepare a short program of nature songs.

e. Select a tree for planting and make arrangements to set it out in the park, beside the highway, on the school grounds, or in the yard of a neighbor.

f. Write letters inviting parents, supervisor, and others to visit the school on Arbor Day and see the program.

g. Make individual scrapbooks containing mounted leaves

and others containing tree pictures cut from magazines.

h. Appoint committees on receiving visitors, making arrangements, planting the tree, and judging exhibits. Select these committees from pupils making the best records in recognizing trees, leaves, flowers, and weeds.

i. Plan contest: (1) bouquet containing the greatest number of wild flowers, (2) bouquet most attractive in color and arrangement, (3) best collection of correctly named weeds, (4) best collection of correctly named woods, and (5) best collection of mounted leaves.

j. Program on Arbor Day consisting of poems, compositions, music, exhibits, contests, and the ceremony of tree planting.

k. Supplementary activities for little children might include:

(1) Arbor Day guessing games, in which the names of pictures of ten or more different kinds of trees are given.

(2) Sand box project in which a park is laid out and planted with trees, shrubs, flowers, etc., made by the children in the art period.

(3) Gardening, in which flower seeds are planted out of doors or in boxes and pots in the schoolhouse.

UNIT III. To study the value of birds, and to prepare a Bird Day program

1. Class activities:

a. Make a field trip, observing birds and learning their names. Make notes on size, color, flight, habitat, and activities of all birds seen on the trip.

b. Collect bird pictures and put in a scrapbook, or in an illustrated bird chart.

c. Study foods of different birds, and prepare food charts.

d. In winter set up a "lunch counter" for birds that remain in the community.

e. Study bird songs and calls, and imitate in syllables or by whistling. Read poems in which bird calls are given: "Bob White," Cooper; "Robert of Lincoln," Bryant; "The Meadow Lark," Coolbrith.

f. Study how birds may be protected. Note their enemies: men and boys who kill birds and collect their eggs; cats, snakes, weasels, hawks. Organize an Audubon Society, and create a desire to protect birds.

g. Study laws protecting birds, wild flowers, fish, and game. Read Longfellow's "The Birds of Killingworth" for its bearing upon bird protection.

h. Study bird migration and make charts showing routes. Memorize Bryant's "To a Waterfowl," and read Lampman's "Canada Geese — Trumpets of Dawn."

i. Make a bird calendar, and record when birds return in the spring and when they leave in the fall. Note any points concerning time of nesting, hatching, flying, etc.

j. Conduct a contest in making bird houses and exhibit results on Bird Day, awarding a blue ribbon for first prize, a red for second, a white for third.

k. Provide drinking and bathing places for birds.

l. Program on Bird Day consisting of poems, stories, music, contests, and exhibits.

UNIT IV. To study insects, both harmful and beneficial, and to prepare a program to give before the parent-teachers association

1. *Class activities:*

a. Make a field trip and collect specimens of as many insects as can be found. Observe the kinds of plants upon which insects are found, and insects' habits of eating, resting, and movement. Mark on map any locations of colonies, or any points which are the only habitat of certain species.

b. Collect specimens of insects harmful in field and garden. Study and illustrate the life history of each. Discover methods of eradication and control. Read bulletins of the state agricultural college and United States Department of Agriculture on harmful insects, and write reports and compositions on the reading and observations.

c. Collect and study specimens of insects harmful to orchard and shade trees.

d. Collect and study specimens of troublesome insects of the house.

e. Collect and study specimens of insects beneficial to man.
f. Program on regular meeting date of parent-teachers association, similar to Bird Day and Arbor Day programs.

UNIT V. To understand the life processes of the growing plant

1. Class activities:
a. Make seeds germinate in varying degrees of warmth.
b. Make seeds germinate with varying degrees of moisture.
c. Grow seeds and plants without air.
d. Show that liquid rises through the roots, stems, and leaves of a plant.
e. Test various parts of the plant for foods of its own manufacture.
f. Grow plants without light.

UNIT VI. To plan, prepare, plant, and care for a garden

1. Class activities:
a. Plan a garden.
b. Prepare the ground to receive the seeds.
c. Select seeds: (1) examine seeds with hand lens for weed seeds, dirt, and other foreign matter; (2) test seeds for germinating power.
d. Make a coldframe.
e. Plant seeds in: (1) garden, and (2) in coldframe.
f. Cultivate the ground and keep it free from weeds.
g. Thin plants until there is plenty of room left for them to grow.
h. Transplant certain varieties from coldframe.
i. Irrigate as necessary.

Three typical lesson plans. The three typical lesson plans which are given below deal with the topics of greatest interest to children:[1]

PLAN I

UNIT OF INSTRUCTION: Some seeds that go traveling
TYPE OF LESSON: Socialized-topical; making new connections

[1] These lesson plans on science were prepared by Doris Kildale, Stanford University, California.

MATERIAL NEEDED: Seeds of maple, ash, dandelion, milkweed, cockleburr, burr clover; nuts, berries, etc.

TEACHER'S AIMS: To give scientific information, practice in careful observation and analysis, and to contribute to children's enjoyment of nature

PUPILS' AIM: To find out how certain seeds travel

DEVELOPMENT: Observation and discussion:

1. Seeds that have wings — maple, ash
   - *a.* Where the seed is hidden
   - *b.* Where the seeds hang on the tree
   - *c.* How they can sail
   - *d.* How the mother tree makes sure the seeds will travel to new places
2. Seeds that have sails — dandelion, milkweed
   - *a.* Where they grow on the plant
   - *b.* Why the heads are held upright
   - *c.* What makes the seeds sail
   - *d.* Why so many seeds are produced by one plant
   - *e.* How the seeds anchor to the soil
3. Seeds that catch rides — cockleburr, burr clover
   - *a.* How they catch hold
   - *b.* How they differ in the way they catch hold
   - *c.* What they catch hold on (hair of animals, clothing)
   - *d.* Why this is a good way to travel
4. Seeds that wait to be carried — acorns, nuts, berries
   - *a.* Why they have to be carried
   - *b.* Why they cannot go by themselves (no sails or wings)
   - *c.* What carries them (men, animals)
   - *d.* How they pay for being carried

CONCLUSIONS:

1. The differences in the way seeds travel
2. The nature of the traveling devices
3. The care taken to insure their traveling
4. The reason for their traveling

PLAN II

UNIT OF INSTRUCTION: The Queen Bumblebee

TYPE OF LESSON: Socialized-topical

TEACHER'S AIMS: To arouse nature interest, create enjoyment, and to try to answer some of the many "how's" and "why's"

FIFTH-A PUPILS AT WORK IN THE SCHOOL GARDEN

PUPILS' AIM: To satisfy their curiosity about the bumblebee
DEVELOPMENT:

1. *Origin: Pupil.* "Teacher, right out by the fence is a great big bumblebee. It is the biggest I have ever seen. It is buzzing around a hole in the ground and is as busy as can be."
   Teacher. "Let us go out and see her. Shall we?" (The teacher and the pupils go out to see the bumblebee, and watch her, and talk about her.)
2. *Observation:* What is she doing? (Working around a hole.) What kind of hole? (An old mole or mouse hole.) What would she do if there were no hole? (Dig one.) What does she want a hole for? (To make a nest.) What kind of nest will she make? (Tunnel shaped, as large as your head.) What will she put into the nest? (Irregular shaped cells for holding babies and food.) What is she putting into the hole now? (Pollen and honey. Tell about her long tongue.) What are the pollen and honey for? (Food for baby bees and a place to lay eggs.)
3. *Further observation and discussion:* What does the bee look like? (Color black and yellow, velvety.) Why is she so much bigger than most bees? (Because she is a queen. Tell what a queen is; family life of bees.) Why does she sing? (She is happy and busy. Her tone changes when she is angry or disturbed.) Why is she alone? (She has just come out of the ground after a winter sleep. Only queens live through the winter.) Where has she been? (Asleep in a hollow tree, a crack in a rock, or under leaves.)

CONCLUSION: The start of a new bumblebee family

PLAN III

UNIT OF INSTRUCTION: The Red-tailed Hawk
TYPE OF LESSON: Socialized-topical
TEACHER'S AIM: To give useful scientific information
PUPILS' AIM: To learn how the red-tailed hawk is a good friend
DEVELOPMENT:

1. How to tell the red-tailed hawk from his bad cousins
   a. Size — as big as a buzzard
   b. Color — all the grown birds have bright reddish-brown tails; rest of the body is brown, with under side brown to white.

c. Habit of flying — soaring flight as contrasted with the hovering hawks, the bullet hawks, and the darting hawks. Wide tail spread.

2. How he helps his friend, the farmer
   a. His food — pests, ground squirrels, gophers, and field mice. (Has been known to be harmful, but only rarely.)
   b. Damage done by such pests to grain, vegetables, etc.
3. Where he nests
   a. Hole in earth bluff, and in rocky cliffs.

CONCLUSION: The red-tailed Hawk is not a chicken-hawk. He is one of the best friends the farmer has because he eats the pests that destroy the crops. He should not be killed.

Seasonal organization. In order to have real materials available, the seasonal organization of topics and units in natural science is necessary. One of the greatest difficulties will be encountered in the winter months in cold climates, when fresh materials cannot be obtained. This difficulty can be met by providing in advance what will be needed and also by selecting topics that are appropriate for any time of the year. The outline which is given on the following pages contains more items than a teacher will be able to use when they have been expanded into orderly units of instruction. Many of the items will not be suitable for local needs and conditions, but with selections from the total number, together with topics especially valuable from the local point of view, it will not be difficult to plan a science program for the entire elementary school period.

Methods of treating such items and topics and directing ideas may be seen in the outline given on page 381. The larger outline, given in Table XIX, between pages 382 and 383, offers suggestions for work month by month and grade by grade.

Nature-study clubs. Nature-study clubs with a president, vice-president, and secretary can be formed, and field trips taken with the teacher whenever the program permits.

TABLE XVIII. A SEASONAL PROGRAM FOR SCIENCE INSTRUCTION

GRADES	CENTRAL IDEA	SUGGESTED ACTIVITIES
1 and 2	Recognition of things in immediate neighborhood, and their relation to other forms. Names and characteristics.	Field trips, discussion, oral lessons, collections, plays and games, cut-outs, drawing, coloring, exhibits, appreciation.
3 and 4	Observation and recognition. Adaption to environment and relations. What things do and look like.	Field trips, discussion, reports, clubs, entertainments, collections, exhibits, booklets, drawing, maps, coloring, growing.
5 and 6	Observation and experiment. Life histories, how to protect and develop.	Field trips and excursions, reading, collections, exhibits, clubs, entertainment, drawing, growing, life histories, maps, surveys, special projects.
7 and 8	Value to man. Experiment and observation. Likenesses and differences. Special interests developed.	Field trips and excursions, reading, collections, clubs, drawing, maps, growing, construction, protection of desirable types, eradication of undesirable; state laws and local improvements.

Collections of cocoons, birds' nests, hornets' nests, wild flowers, woods, and rock forms may be made for the nature-study museum. These clubs usually have slogans such as "Protect the Birds," "Know the Wild Flowers of Your Community," and "Save the Forests." Members agree not to pull up plants by the roots, and to protect birds, to conserve small fish, and in general to have good "nature manners."

The Boy Scout program includes a special study of trees, as well as of much other nature material. The Girl Scout program for the current year is emphasizing tree planting. "Every Girl Scout a tree planter" is the aim of the national director. Where these organizations exist, the members may help in the nature-study plans. The pupils may learn

the names of the trees they pass on the way to school. They may take a tree census of the neighborhood, listing varieties, sizes, and condition. They may study tree planting in the park, and along the streets and the highways. A nature diary, in which is kept a record of all the interesting things learned about trees, is another good project for clubs. If any of the pupils have kodaks, they may specialize on pictures of trees, wild flowers, animals, birds, and natural scenery.

Correlation with other subjects. The natural sciences should be given a definite place on the daily program. They should in addition be correlated with other subjects, not to the extent of neglecting them in the period assigned to them, but as a means of unifying and vitalizing all learning. In the chapter on art it will be seen how many opportunities there are for using nature subjects; likewise, it was observed that the playground program might be strengthened by calling on the resources of nature and nature interests. In the same way science teaching may be connected with other subjects, as the following outline shows:

Subject	Correlation with Science Instruction by
Arithmetic	Devising problems, such as plotting a garden for planting; calculating the number of insects eaten by birds, the number of seeds produced by plants, the distances birds travel in their annual migrations, the number of eggs laid by insects and fishes, the rate at which weeds multiply, the amount of damage that may be done by a grasshopper, the money value of a toad, the amount of lumber in a tree, the average size of leaves of the same species of plant, and the parts of a flower.
Civics	Studying means of protecting birds, conserving forests, protecting wild flowers; the control of flies, mosquitoes, and other insect pests; weed laws, game laws, the use of vacant lots for gardens, and the organization of a science club.
Drawing	Making free-hand drawings of natural objects, color reproductions of birds; making butterfly, moth, and

TABLE XIX. GENERAL PROGRAM FOR SCIENCE INSTRUCTION

GRADES	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY
I	Common birds Caterpillar and cocoons Squirrels Autumn leaves Coloring of flowers Planting bulbs Seed travelers The sky The moon	Common birds Insects about us Animals about us Autumn coloring Tree shapes Selection of class tree Seed booklet Winds and clouds The North Star	How animals prepare for winter Vegetables Fruits Tree parts Goldfish Weather calendar Spiders and webs Frost pictures The Big Dipper	Trees used for Christmas Conservation of trees Winter buds Window-box planting Winter birds The thermometer The seasons Snow crystals The Milky Way	Winter landscape Care of pets Care of birds Snow and sleet The sun Uses of trees Winter birds	Winter sleep of animals Fur-bearing animals Weather calendar Uses of air Windmills Trees in winter Uses of ice and snow	Signs of spring Returning birds Spring buds Spring winds The brook system Evaporation Storm clouds Planting window box	Rain How seeds grow Buds and leaves Spring flowers Hills and valleys Baby chickens Rabbits Transplanting	Circus animals Seed planting Flower booklet Tadpoles Toads Care of plants Birds' nests Seasons
II	Bird migration Fall insects Old birds' nests Chipmunks Fall garden flowers Flower visitors Garden vegetables The soil	Nut trees Water insects Seed travelers Parts of a plant Bird migration Vegetable harvest Cloud forms Leaf collections	How insects prepare for winter Evergreen trees Tree survey Tree planting Structure of bulbs Weather record Freezing The sky — colors	Plants used for Christmas decoration Vegetables used for winter food Care of birds in winter Temperature record Snowfall record Care of house plants Weather vanes	Sleeping buds Winter berries Winter food for birds Snow houses Moon changes Effects of freezing Rocks and minerals	Nature calendar Domestic animals Melting snow Ventilation Winter homes of birds Air pressure How trees are protected	Earthworms Snails and slugs Pussy willows Drainage Growth of leaves Seasonal changes Animals for pets Garden plans	Bird songs Sounds made by insects Phases of the moon Land forms Planting seeds April showers Tadpoles	Moths and butterflies Woodland plants Meadow flowers Bouquets Nature manners Grasses and grains Springs and brooks
III	Seed pods and cases Seed collections Roots and stems Leaf forms Fruits What plants require Weeds of neighborhood Kinds of soils	Parts of leaves Winged seeds Structure of seeds Fishes Wild animals of neighborhood Autumn planting The planets	Plants that live through the year Annuals Window-box planting Insect life histories A common bird Weather records Magnets	Weather maps Frogs and salamanders Water birds Flower conservation Sand and clay The sun and stars The compass	Animal tracks Length of day and night Stars (Orion) Evaporation and condensation The pine family Wind action	Plants that supply winter foods The sugar maple Farm animals Wild relatives of domestic animals Building stone Bacteria	Seed catalogues Cuttings Transplanting Sheep Frictional electricity Whistle Comets and meteors	Lilies Mosquitoes Care of lawns Boring insects Cultivation of plants Water power Fruit blossoms	Pollination Ferns How seeds are formed Climbing plants Irrigation Water plants Depth of planting
IV	Parts of a flower Autumn flower families Leaf galls How to prune trees Injurious insects Foods in stems Conservation of flowers Plant colonies	Foods in seeds Bees and wasps Turtle or tortoise Conservation of game Seed harvest Bird survey Effects of frost Physical geography of neighborhood	An aquarium Crayfish Trees for lumber Conservation of scenery Tree survey Winds — kinds and effects Weight of air Sail boats	Uses of wood Fungus growth Greenhouses Plant protection in winter Erosion of soils Sources of Christmas trees Movements of earth Balloons	Forest protection Tree sprays Indoor plants Rocks and minerals Snow and ice Crystallization Bird shelters	Mosses and lichens Trapping Trees for fuel Artificial ice Rain gauge Inclination of earth The forest service	Tops Coal Seed-testing Equinoxes Waves Uses of birds Floods and flood protection	Water wheels Transplanting trees Tides Bird houses The school garden Roots Water plants How rocks are changed to soil	Shade trees Lightning and electricity Bird baths The home garden Improving soils Mushrooms and toadstools Harmful insects
V	Ants Equinoxes A composite flower Starting plants from cuttings Forest fires Origin of weeds Dispersal of plants	Poisonous plants Starting plants from layering Forests in United States Seed charts Tree maps Preparation of gardens for winter Insects and trees	Tree forms Weather calendar Ornamental trees Animals and trees Plant cells Orchards of neighborhood Fog and mist	Seed structure Weather Bureau Wood and bark collections Spore plants Seasonal changes in trees How rocks are made Life story of a star	Birds that nest in trees Value of toad Seed comparisons The telephone Distribution of animals	Forests and floods Underground water Insect enemies Plants that supply clothing Heating and ventilation Zones	Kites Hotbeds and coldframes Insect friends Water supply Tree enemies Comparison of germinating seeds	Rats and mice Flower structure Fresh-water mussel Bird calendar Milk supply How plants are fed	Burrowing animals Cross-pollination Insects and flowers The house fly Flower calendar Milk testing Work of plants
VI	Poisonous seeds Economic value of birds Crop marketing Sundials Causes of eclipses Devices for seed dissemination Camp-fires	Salmon or other food fish Storage roots and tubers Foods in fruits Constellations Making fire Study of a plant Plant geography Plant collections	Social insects Weather signals Grafting and budding How fire burns Parasitic plants School museum Tree nurseries One-celled plants	Furbearers Length of day and night Life cycle of a tree Effect of low temperatures Birds in literature Telegraph Insects in winter	Game birds Electric bell Solar system Weather signs Soil composition What plants take from soil Plants in literature	Transient birds Garden planning What forests do for us Radio set Plants in winter Nature lore Science reading Composition of seeds	Game preserves Cross-sections of stems Yard improvement Animals in zoo Star charts Why the wind blows How trees grow Plants in soil building	Public parks Snakes Leaf form Longitudinal sections of stems Schoolground improvement Larvæ of water insects Shrubbery	Disease carriers Leaf arrangement How trees grow Cover crops Camp rules Constellations Sucking insects Imported plants Plants of a given region
VII	Sources of heat Nature of light Sources of food Properties of air Sources of water supply How plants make food	Combustion process Reflection of light Tests of food Air pressure Water forms Plant enemies and their control	Building fires Refraction and lenses Food values Uses of air pressure Distribution of water Recognition of common plants	Fuels and fuel supply Color Foods and diet The barometer Water in the home Plant cells	Heating equipment Optical instruments Malnutrition Altitude and air pressure Industrial uses of water Carnivorous plants	Ventilation and humidity Structure of the eye Preservation of foods Chemical composition of air Hot-water systems Mosses, lichens, and fungi	Thermometers Care of the eye Organisms that attack food Air and life Pure water Parasitic forms of plant life	Fire extinguishers Eye defects Care of foods Cleaning air Softening water Stems and plant circulation	Explosions Lighting arrangements Special foods (milk) Moistening and heating air Uses of water Leaves and their functions
VIII	Coils and batteries Plant structure Animals and their distribution Time and the seasons Winds Materials in soils	Cells Plant feeding The struggle for existence Earth as a planet Rainfall Organic matter in soils	Electro-magnets Plant protection Adaptation to environment The moon Clouds and fog Soil fertility	Electric wiring Plant propagation Value to man Tides Frost, hail, and snow Types of soils	Control of electricity in the home Plant improvement Habits of animals Eclipses Storms Agencies in soil formation	Electrical conveniences Seeds and germination Fish The planets Climatic differences Soil water	Electric bells Gardens Mammals The stars Climate and life Soil air	Electric motors Conservation of plant life Birds The constellations The weather bureau Soil temperature	Radio construction Crops and soil exhaustion Insects The sun Weather records and prediction Soil cultivation

flower designs for nature calendars; paper cutting of insects and vegetables.

Geography	Studying relationships between geography and the natural sciences; geographic influences on animals and plant life; course of bird migrations, seasonal changes in trees, how seasons influence animals and plants, and temperature and weather.
History	Studying introduction of plants and animals by the early colonists, days of the Indian and buffalo, inventions, industrial development, and lives of great scientists.
Hygiene	Studying bacteria, household science, disease-carrying animals, poisons, edible foods and nutrition, and poison plants such as ivy, oak, and sumach.
Language	Oral and written reports on excursions, experiments, and science topics.
Manual Arts	Building bird houses, fly traps, watering devices for birds, seed boxes, window boxes, trellises, hotbeds, radios; repairing faucets, electric irons, and soldering; and studying woods, paints, and building materials.
Music	Nature songs; studying musical instruments such as piano, phonograph, violin, drum; and sound.
Reading	Selecting nature literature: poems of birds, flowers, trees, clouds; stories of dogs, horses, bees, ants; accounts of great scientists and their work.

Summary. Science is an important factor in modern life, and is consequently one of the most fundamental subjects for the elementary school. Although it is increasing in importance there is a tendency to neglect it, a situation that the teacher should remedy. The aims of science instruction are three: (1) to give useful knowledge and skills; (2) to give training in scientific methods of thinking and working; and (3) to provide recreational opportunities. Materials should meet these requirements and should satisfy the interests of children. Proper motivation is dependent upon selecting vital, interesting, and common subjects. The problem method of teaching should be used. Science should be

correlated with other subjects, but it should also be accorded its own place on the daily program.

EXERCISES AND PROBLEMS

1. Give as many reasons as you can why the teaching of the natural sciences in the elementary school has not succeeded.
2. Show how knowledge of science gives freedom from superstition.
3. Keep a record of the science questions asked by the pupils in your class. Of what nature would you expect them to be?
4. Draw up a plan for the organization of a bird club.
5. What is meant by the scientific method? Is it true that one should accept the vote of the majority as having solved a problem?
6. Prepare a recreational program for upper-grade pupils, based upon science.
7. What are the objections to nature fiction?
8. Give as many reasons as you can why science should be studied from real materials instead of from books. Is it advisable to use books as supplementary to real materials?
9. Should much time be given to drill and review in science teaching? Why or why not?
10. How is the study of science motivated?
11. Prepare a plan for teaching a lesson in natural science.

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CHAPTER XX

TEACHING MUSIC AND ART

Common elements in music and art. Music and art have many elements in common. They have a common purpose — the expression and enjoyment of beauty. In method and results they are the embodiment of the ideal in the life and work of man. Their mission is to promote the highest type of idealism and to make for better individuals, better homes, and better communities. They are recognized as universal human needs. They differ from most of the other elementary-school subjects in not being tools or means to an end, but ends in themselves. Music and art are valued because they are inspiring and satisfying to all.

Psychologically, they have many things in common with other subjects and with each other. Music is much like oral reading. The study of it involves: first, a comprehension of the meaning of its symbols and phrases; second, voice control that makes for proper expression and interpretation; third, a reasonable rate of speed in reading; and fourth, the creation of a feeling tone, or emotion. Art is more like written language. The first important process in learning it is comprehending the idea back of the expression. This is followed by skill in execution, and finally, as in the case of music, comes feeling, or appreciation.

Skill in music is dependent upon making connections between an outside situation (singing or musical symbols: i.e., notes) and the voice. Skill in art is making the proper connections between an outside situation (an object, story, design) and the hand. Appreciation in either depends chiefly upon the number of familiar elements in the stim-

ulus-situation and their power to awaken associations. We can say there is appreciation of a vocal musical number, a phonograph selection, a vase, a piece of tapestry, or a picture which arouses associations of an emotional character. Skill in music and art rests upon a clear and accurate impression reinforced by drill. The rules for developing skill are exactly the same in music and art as in spelling, arithmetic, and the mechanics of reading, and are likewise embraced under the three laws of learning: (1) make the original presentation as vivid and effective as possible (readiness); (2) give repetition as often as is necessary in order to fix the connections (exercise); and (3) see that learning is attended by enjoyment (effect).

I. TEACHING MUSIC

Teaching music; grouping. For music teaching in the ordinary type of rural school, only two groups are required. The lower group may consist of the first three or four grades; the upper group of the remainder. In a town or city school, two divisions may be necessary in every grade: (1) pupils who have had no training, and (2) pupils who have had training. If the teacher is not well trained in music, or if the program is overcrowded, she can often get one or two of the older pupils to help her in teaching music to the beginners, especially if there happens to be another room available.

It is a good plan to seat the poorer singers in the front of the room and the better singers in the back. The teacher is then better able to diagnose individual needs and make corrections. Another good method of grouping is to put the children with the lighter voices in the front of the room and those with the heavier voices toward the back. Classes are also sometimes separated into two groups, singers and "monotones" (pupils that cannot vary the pitch of their

voices); the latter are instructed to listen but not to sing. This is a mistake. A "monotone" is simply a person whose voice is untrained, and inasmuch as we learn to sing by singing, to deny him practice is to cut him off from the chance of learning to do better. It would be just as sensible to keep a pupil who cannot spell from taking part in the spelling lesson. Every pupil should be given a chance to learn how to sing, just as he is given a chance to learn how to spell.

Teaching rote singing. Musical instruction should begin with rote singing, by which is meant a memorized performance from hearing others sing. The words and tones are memorized by repetition, just as a poem is memorized. The number of songs which should be memorized varies with the ability of the pupils and the time which the teacher has for instruction, but should be not less than twenty a year in any grade, and may go up to as many as fifty. As a rule the time given to rote singing is about half the total time allotted to music. Rote singing is more inspiring than note singing, it results in the mastery of a wide variety of material, it brings out the more timid pupils, and is the easiest method of introducing sight reading.

For the first few days in a new school the teacher should depend altogether upon rote singing, even if she is perfectly competent to teach sight reading. This plan will enable her to get acquainted with the children and their voices, learn something of the skill which they already possess, and inspire them with courage and interest. Pupils feel safety in numbers, and, until they get accustomed to a teacher, are almost sure to sing some familiar song in chorus more freely and spontaneously than they will practice the scale.

During a recent observation of the work of a beginning teacher with an eighth-grade class, this point was very

plain. The pupils had always enjoyed rote singing at opening periods and on special occasions, but few of them had received training in reading music. On the first day, the new teacher stepped briskly into the room and marched to the desk. Calling the children to order, she sounded a note on her pitch pipe and commanded, "Sound *do*!" The pupils gazed at her with an expression in which bewilderment and apprehension were equally compounded. To sound "do" was as far away from their ability as to speak Greek. The teacher again blew a note on the pitch pipe and ordered more emphatically, "Sound *do*!" The children shuffled in their seats but none of them uttered a sound. After several repetitions of the same type, during which the teacher lost her temper and the pupils sat in sullen silence, the principal came in and suggested that there were several songs the pupils knew how to sing, and in a few minutes what threatened to be an *impasse* was avoided.

Selections for rote singing. There are many songs suitable for rote singing, among which five main classes may be distinguished: (1) folk songs — "My Old Kentucky Home"; (2) national and patriotic songs — "America"; (3) classic songs — "The Wanderer"; (4) college and school songs — "There's Music in the Air"; and (5) popular songs — "There's a Long, Long Trail." Seasonal songs, also, may be mentioned as interesting to children in correlation with their nature study. This group includes songs for every month, and nature songs about birds, flowers, wind, rain, and sunshine; while not strictly seasonal, these may be adapted very well to various times of the year. Closely allied to other groups are the songs for special occasions, such as Thanksgiving, Christmas, and Easter.

The songs should be well graded. The word should make an appeal to the reason, imagination, or emotions. Little children soon lose interest in a song with words beyond their

understanding, and nothing is more distasteful to the older pupils than a song intended for the kindergarten or the primary grades. When the interest in a song flags, or when a selection seems trivial and babyish to the singers, the music has no power to stimulate the emotions or appeal to the intellect. It will make for better grading to have the children help in selecting the songs. Probably they will suggest some songs that are not appropriate, but usually they will name those which are within the limits of their comprehension and appreciation.

How to teach a rote song. If the teacher can sing, she should begin teaching a rote song by singing it through, the pupils listening. She should next sing it phrase by phrase, the pupils singing each phrase after her. The next step is to combine the first and second phrases; the first, second, and third; and so on. Finally the entire song is sung from start to finish, with some attention given to interpretation, and, if the pupils have the music, to marks of interpretation. It is then repeated two or three times daily until the children can sing it without assistance. It is best to put the music into the hands of the pupils (above the first grade). The words should be understood and enunciated very clearly. In general, the piano should not be used until the song has been learned.

After the song is mastered in concert, it should be practiced individually — that is, by the first row singing the first phrase, the second row the second phrase, and so on until the whole song has been sung. The process is then repeated by having the best singer sing the first phrase alone, other children taking turns until the period is ended. In every music period, the pupils should be advised to sing sweetly and softly in order to avoid developing the high strident tones characteristic of so much schoolroom singing. The ventilation should be watched so that there will be

plenty of fresh air, and the pupils should keep an easy but erect posture throughout to facilitate breathing.

If the teacher cannot sing, she still has recourse to two devices in developing rote singing. She can select one of the pupils who sings and have her take the lead. Or if she knows how to play, she can gather a small group of the best singers about the piano or organ at intermissions, and let them practice the songs that later the whole class are to learn. A phonograph can be used for this instead of a piano or an organ. The record is first played, the pupils listening intently. It is then played again, the pupils following; and the song is repeated until it can be given without the aid of the instrument.

Sight reading. If the teacher is trained in music, she can begin the teaching of sight reading in the second grade. The song used should be one that has been well learned by rote. The children are first led to sing the tune in the neutral syllable "lu." The second step is to go over the song again from flash cards, charts, or the board, the teacher pointing to the notes as the children sing the words. As in rote singing, individual pupils are called upon to sing, each pointing to the notes as he sings the words. Third, the syllables should be taught, following the staff notation. They should be repeated by the children many times until they are perfectly familiar.

When the syllables can be sung independently, the class should return to rote songs, substituting syllables for the words. To test the connections between tone and note, the teacher should sing phrases with "lu," the children finding the notes to correspond. Making copies of phrases of familiar songs aids in fixing the relationship of one note to another and gives variety to drill. The final step in sight reading is reached when the pupils can begin a new song with help.

The National Council of Music Supervisors has developed standards of materials, procedure, and attainment in the study of music for each grade of the elementary school. These may be fairly well summarized as follows:

I. Materials:
- *a.* Music textbook and manual
- *b.* Chromatic pitch-pipe
- *c.* Phonograph and records
- *d.* Staff liner
- *e.* Blank music-writing paper

II. Procedure:
- *a.* Begin each lesson with the singing of familiar songs. Give about one fourth of the class period to this work.
- *b.* Review and drill on songs previously studied. (2 to 3 minutes.)
- *c.* Take up the new work of the day. (5 minutes.)
- *d.* Close by singing songs suggested by the pupils.

III. Attainments:
- *a.* Ability to sing correctly thirty to forty appropriate songs, with the addition of the same number each year.
- *b.* Ability of ninety per cent of the pupils to sing independently, freely, and correctly at least five of the songs learned by the class as a whole.
- *c.* Ability of at least twenty-five per cent of the class to sing individually by sight as well as the whole group can sing.
- *d.* Ability to recognize and give the titles, from hearing the first few measures, of at least a third of the songs learned.
- *e.* Two-part singing and three-part treble voice singing in the sixth grade.
- *f.* Increasing appreciation and understanding of music.

Appreciation lessons. The last, and probably the most important, aspect of musical instruction to be considered is the development of appreciation. If music serves its real function as art, composing it, reproducing it by the voice or by a musical instrument, and hearing it must all be accompanied by a pleasurable feeling which may be called appreciation. The word appreciation comes from the

Latin: *ad* = to, and *pretium* = price, the meaning being literally, to increase the price of. Music which is appreciated is made more valuable. In the case of the composer and the re-creator, the pleasurable feeling which is called appreciation is owing in some measure to the activity of composing and performing. With the audience, however, the pleasurable response to the beauty that is in tones and their manifold combinations is the outcome of listening.

This appreciation, or pleasurable feeling process, is not the result of knowledge, for a person can enjoy music without knowing anything of its form and theory, and without being able to sing or play. To be sure, appreciation grows as creditable selections become familiar, and a really good piece of music may have to be heard many times to be fully enjoyed, nevertheless the above statement is a true one. In order that there may be no more drill than is necessary for maximum appreciation, every feature of the listening period should be conducive to the arousing of emotion. The pupils should be comfortable; they should anticipate enjoyment. They should be attentive but not repressed. The teacher who criticized her pupils in the music class by saying, "Why, they actually come in here expecting to have a good time," did not understand the function of the lesson in appreciation.

Appreciation, or "listening," lessons in music have become a part of all modern instruction. We have come to realize that every human being is a potential consumer of music. There are a thousand who listen with enjoyment to one who plays or sings with exceptional skill. It is also quite easy for any school and any teacher to provide for musical appreciation. Children enjoy listening to their classmates who can play or sing. Members of the community are often willing to give musical programs before the school. The best dependence, though, is to be placed

on the phonograph, which, with a library of good records, is an essential item of school equipment.

Using the phonograph. In using the phonograph, the first care should be to select records that are adapted to the pupils. If the children have had no training in listening, the first lessons should be very simple. The music should have such an appeal in itself that the teacher will not need to explain why it is good — though of course every record played before the children should have intrinsic merit. If the teacher is not sure of her own taste in this matter, she should get the advice of one of the better phonograph companies, or should consult Fryberger's *Listening Lessons in Music*. Many of the new courses of study, too, contain the names and numbers of records arranged for school use by grades.

The technique of listening is not easy to describe. It is essential that the children should be attentive, but attention ought to be voluntary, not forced. Then, they should follow the music as thoughtfully as they follow a good story. At first, in order to help them to concentrate, the pupils may be asked to listen for the kinds of voices, the different instruments, to tell the story, or to catch the rhythm. At no time should they be asked, "What have you learned?" instead the question should be, "Did you enjoy it?"

Records should be repeated on ensuing days so long as interest in them lasts, but new selections should be added at the rate of at least one each listening period. It will stimulate the pupils' attention to permit small groups of them to select records and give concerts for the benefit of the others. Under this plan, the girls may take charge of the program one week, the boys another. The school library of records may be supplemented and new interest created by suggesting to the pupils that they bring their favorite record from home to play for the school. After a new record is played,

a few minutes should be given to its discussion. The teacher should not talk much about any selection; but while it is being rendered she should pay careful attention to it.

Socialization through music. Music has high socializing values. This signifies that it can be used to build up school spirit and to develop a feeling of unity and likemindedness. Favorable occasions for socialized music are opening exercises and all holiday and special-day events. Friday-afternoon entertainments, rallies, receptions for parents, and the last day of school offer excellent opportunities for bringing into play whatever musical ability the children possess, at the same time these occasions supply a superior type of motivation. The phonograph is just as useful for special occasions and social gatherings as it is for class periods.

If the teacher is able to direct singing, the community "sing" will prove useful in bringing the school and the community together. There are only two important rules to observe in this undertaking. The first is to begin promptly, spiritedly, and good-naturedly; the second is to select songs that are well known and well liked. Everybody can sing, and likes to sing, "My Old Kentucky Home," "Annie Laurie," "Columbia, the Gem of the Ocean," and "O Come, All Ye Faithful." Although suitable songs for community and school occasions are to be found in every good general collection, the following list is given here because the songs in it have been found to be general favorites.

Abide with Me
America
Believe Me if All Those Endearing Young Charms
Blest be the Tie that Binds
Blue Bells of Scotland
Bonnie Blue Flag
Come Back to Erin
Darling Nelly Gray
Gentle Annie
He Leadeth Me
Jingle Bells
Juanita
Kathleen Mavourneen
Lily Dale
Lorelei

Love's Old Sweet Song
Midshipmite
Mollie Darling
My Faith Looks up to Thee
My Heart's in the Highlands
Nobody Knows the Trouble I've Seen
Old Black Joe
Old Folks at Home
Old Oaken Bucket
O My Darling Clementine
The Quilting Party
Robinson Crusoe
Susan Jane
Sweet and Low
Swing Low, Sweet Chariot
Turkey in the Straw
Uncle Ned
Wait for the Wagon
When You and I were Young, Maggie
Work, for the Night is Coming

II. TEACHING ART

Content and objectives. The conception once was that drawing and picture study should constitute the principal subjects of study in art. This conception is now looked upon as being too narrow, and in its place has come the idea that it is the purpose of art to help children realize beauty and enjoyment in all the work of their hands, and to find beauty and enjoyment both in nature and in the things made by man. Art is not something for occasional use; it has a place in all the activities of life and in its whole environment.

The teacher should therefore endeavor to connect art as closely as possible with all the other work of the school, with the school environment, including the classroom and the playground, with the home, and with the community. It should be her endeavor to obtain expression and enjoyment of beauty in dress, in design and color in the home, and in purchased articles. The opportunities for doing this are very numerous. We cite the following examples:

1. Improvement of the school grounds
2. Decoration of the schoolroom
3. Growing flowers in window boxes
4. Arranging flowers in vases
5. Doing and arranging school written work
6. Illustration of stories and compositions

7. Arrangement of the furniture of a room
8. School exhibits
9. The school bulletin board
10. Selecting and mounting pictures
11. Selecting clothes
12. Arranging dining-table
13. Gardening and planting
14. Civic improvements — such as clean-up campaigns and tree planting
15. Cards and greetings

Organization of the art course. Two important divisions are included in the organization of courses in art. The first of these is concerned chiefly with content, the second with procedure. The seasonal organization furnishes a typical example of the content idea. Under this plan, art activities are grouped around the various months and seasons, with a large emphasis placed upon holiday occasions and upon nature. In general, here, technique is subordinated to the interests of the children. The actual subjects are chosen from those close at hand, and motivation is secured by making an intimate connection between child life and the art activities. Gifts and remembrances appropriate for special celebrations are an important feature of this plan. For example, in December, the teaching is closely connected with the observance of Christmas. Holly, mistletoe, evergreens, and snowfields furnish subjects in addition to those with which the day is more intimately associated: fire places, home gatherings, good cheer, and good will. Thanksgiving offers a similar opportunity.

In Table XX is given a monthly outline by grades for an art course organized on the seasonal basis. The predominance of activities as distinct from formal principles and technique is easily seen. The stress laid upon nature makes the course very appropriate for rural schools, yet there is sufficient connection with daily life to make the

Table XX. A LESSON PROGRAM FOR ART INSTRUCTION

Grades	September	October	November	December	January	February	March	April	May
I	Booklets of cut-outs Paper folding Paper cutting Sand-table work Posters from pictures cut from magazines	Distinguish different kinds of cloth Paper weaving Names of colors Filling in outlines with colored crayons	Pictures of Thanksgiving mounted Nature collections Sand-table farm Clay modeling of fruits Thanksgiving table	Christmas posters, cards, stars, booklets, tree decorations, candles, and gifts Picture study	Straight-line drawing — fences, ladders, tables, cupboards, windows Use of ruler	Story of flag illustrated Valentines Pictures of famous Americans	Illustration of games — kite flying Cut out bird houses, garden tools, etc. Nature drawing Sand-table farm	Flowers grown in room Stories illustrated Easter cards and baskets Cut flowers from colored papers	May baskets with flowers Design-stick laying and printing Furniture construction from paper
II	Portfolios Color chart Nature collections	Drawing and painting leaves and trees Sand-table forest Booklets of nature	Pilgrim life in pictures Thanksgiving Vegetable and fruit posters	Christmas gifts and boxes Posters Christmas tree Illustrations of story	Drawing Illustration of winter sports Colored crayons	Paper weaving Rug-making Design in rugs Design in nature	Planting Sand-table plants Paper cutting	Easter cards Garden tools cut-outs Kites and windmills Chickens and rabbits Posters of spring	Bird study Sky colors Mother's Day cards and posters Flag Day
III	Colors and tints Matching colors	Indian life and costumes Halloween posters, cuttings, coloring	Nature drawing Thanksgiving illustrated	Christmas posters, landscape, fireplace, candle and window Stories illustrated	Models in paper of means of transportation Toy models Winter scenes	Cloth collections Posters and pictures of birthdays Pictures studied	Lettering applied to posters	Birds and flowers as subjects	Paper cutting and coloring
IV	Tint and shade distinguished Color scales made Flowers arranged in vases	Pottery shapes drawn and cut out Flower and leaf designs made	Pilgrim posters Story of Pilgrims illustrated Bulletin board exhibits	Christmas books, posters, folders, and cards	Drawing from objects	Silhouettes	Lettering Cutting and pasting	Easter booklets	Nature problems
V	Collections of leaves, flowers, seeds, and grasses Nature drawings Coloring outlines	Colors distinguished Water-color work Color designs	Stick design in ink Charts and diagrams	Christmas activities as in preceding grades	Perspective Drawing of buildings	Dress Colors Wall arrangements	Lettering charts and diagrams	Design in making booklets Stencils	Nature problems
VI	Nature drawings from plants, roots, sprays	Color tone and harmony Illustration of fanciful stories	Booklets Thanksgiving interests	Paper construction Christmas interests	Drawing from objects Pottery design	Perspective Illustrative drawing	Lettering posters Sign painting Manuscript writing	Interior decoration Wall-paper design	Nature problems Color work Art in advertising
VII	Color combinations, flowers, bubbles, balloons, dresses, hats, plants, birds	Portfolios Booklets	Post cards Illustration of stories	Posters Presents	Picture study	Drawing charts and diagrams	Mechanical drawing Lettering	House furnishing	Posters Commercial art Civic art
VIII	Color Nature drawing	Portfolios Commercial art	Thanksgiving and Christmas problems		Home planning	Floor coverings	Mechanical drawing	Furniture Pictures	Art appreciation Exhibit of school work

work practical. Gifts, greetings, illustrations, collections, and exhibits provide the chief motivation aside from the intrinsic appeal of color, design, and proportion.

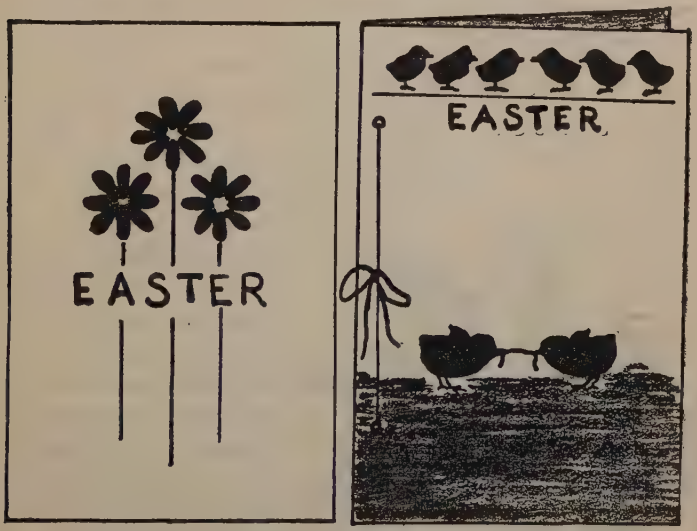

Fig. 24. Putting Design to Use in Easter Booklets

Art procedures. Teaching methods are grouped around six main activities: drawing, illustration, color, design, lettering, and construction. Art appreciation is a necessary accompaniment of all these. Interest in it as an independent field centers around picture study, nature study, and school, home, and community improvement. It should be realized that this organization of procedures need not materially affect what is taught. Using the seasonal plan of organizing materials, drawing, illustration, color, and design come in as methods of dealing with materials, with a growing attention paid to the application of these activities to the needs of life. All this is a striking contrast to the

usage in the old days of logical organization of art courses, when color, drawing, and design were taught independently of any use and of any interests which children might have.

In the pages which follow, we take up the application of the art methods which have been mentioned: drawing, color, design, and so forth, to materials such as are found in Table XX, with a final application of the principles to art appreciation.

1. **Drawing.** Drawing is of two types, free-hand and mechanical. Only pencil and paper are used in free-hand drawing, while mechanical drawing requires in addition certain instruments of precision of which the ruler and the triangle are typical. The object of free-hand drawing is to present the idea or the thing through form; the object of mechanical drawing is to reproduce form and proportion accurately by means of measurement. Free-hand drawing is basic in the primary grades; in the upper grades it should be used in illustrating stories, making sketches for color work, and in all other fields where beauty should clearly take precedence over measured utility. Mechanical drawing should precede most construction projects; it is useful

FIG. 25. A TYPE OF NATURE DRAWING WHICH CHILDREN ENJOY

also in making charts and graphs illustrating facts of history, geography, and arithmetic.

Three types of subjects are readily suggested for drawing. They are: (1) nature subjects, such as leaves, flowers, sprays, plants, fruits, seeds, vegetables, trees, animals, and landscapes; (2) man-made subjects, such as tables, chests, boxes, windows, books, vases, chairs, tools, vehicles, and buildings; and (3) construction plans, either ideal or imitative, which grow out of the foregoing things. Nature drawing that aims at an accurate and detailed representation of the object is called scientific; when it is concerned with producing a feeling of pleasure independent of the accuracy of the representation it is called idealistic. Doing idealistic or imaginative drawing appeals particularly to little children and should be freely permitted.

2. **Illustration.** Illustration differs from drawing in that it portrays experiences while drawing represents objects only. It is used, just as truly as is prose narrative, to tell a story. It differs from narrative only in depending upon lines and color for its effect instead of upon words and sentences. It appeals to all the grades. As in free-hand drawing, children should not be required or expected to produce exact and accurate forms, but should be permitted to give their fancy a wide freedom. The best medium is undoubtedly colored crayon; the best subjects are furnished by stories.

First-graders can in a little while learn to illustrate "The Three Bears," "Peter Rabbit," "Little Red Riding Hood," and "The Gingerbread Man." Fairy tales may be used to stimulate fanciful and imaginative illustration, while games — such as coasting, skating, running, and kite flying — also furnish good picture subjects.

In illustrating a story, the first task is to decide upon the scenes to be represented, an assignment which the pupils

can usually perform alone. Next, the teacher should work out each scene on the board, or on a large sheet of paper before the class. Only the essential features of the story should be introduced. When once the pupils have caught the idea, they should work independently, the teacher making suggestions here and there and giving encouragement as it is needed. Every picture should be repeated until it can be reproduced as quickly as a page of familiar prose can be written.

3. **Color.** Color is held by many to be the most enjoyable of all the fields of art. The aim of the teacher should be to promote this enjoyment by developing in the pupils an accurate sense of color values, a knowledge of pleasing color combinations, and skill in producing such combinations. To learn color one has to work with color. The colors should be shown and their names given, and they should then be identified in leaves, flowers, sky, fruits, rainbow, cloth, paper, rugs, pottery, and in many other available subjects. By means of pieces of cloth, leaves, flowers, the color wheel, and by experiment with water colors, pupils should be taught such fundamental facts as these:

1. Red, yellow, and blue are called primary colors, because they are the colors from which all others are made. Any two of these colors when combined make the complement of the third.
2. Orange, green, and violet are the secondary colors. They are made by mixing equal proportions of two of the primary colors: red + yellow = orange, red + blue = violet, blue + yellow = green.
3. Colors used in full strength or intensity are called normal. The most intense colors are not always the most pleasing. In nature and in common objects, colors more subdued than the normal are usually found. Brilliant colors should be used in small quantities only.
4. A tint is a tone of color lighter than the normal. It is made by adding white to the normal color.

5. A shade is a tone of color darker than the normal. It is made by adding black to the normal.
6. Hue refers to the exact kind of color combination, as blue-green, yellow-green, red-purple, and yellow-red.
7. Value is the quality by means of which the amount of light in a color is distinguished. Children should learn how to produce a large variety of values through mixing white or black with their colors, or through thinning with water.
8. Intensity means the strength or brilliancy of a color. Adding a complementary color makes a color less intense. Mixing the three primaries gives a neutral tone, or gray. Neutrals are appropriate with any color.
9. A color and its complement give contrast, which in an ordinary situation is unpleasing.
10. Warm colors are those in which red and yellow predominate; cool colors are those in which blue predominates.
11. If colors are to harmonize, they should differ only slightly in value; colors of the same value should differ slightly in hue. Great differences in hues or in values are not pleasing.

4. Design. Children like design, and it is therefore not difficult to teach. Its chief principle is arrangement of whatever unit is used — dot, line, flower, symbol in systematic order. Its minor principles are rhythm, symmetry, unification, and adaptation to the purpose for which it is used. Rhythm is obtained by varying the length or breadth of the units, and in character does not differ in any way from rhythm in music and poetry. Unification is having the space intervals between the units of proper size. This principle is applied to the spacing of letters in a monogram or in a manuscript title, the width of the fringe of a rug, and the breadth of the spaces between the units of a design. Symmetry means that the units are so well placed in relation to one another that the completed work seems secure and well-balanced.

There are numerous subjects that can be used in teaching design. Nature offers an inexhaustible source of units and

complete figures in leaves, flowers, wings, and in the stripes and markings on animals, fruits, and seeds. Rugs, wall paper, figured dress-goods, curtains, pottery, china, handkerchiefs, books, tablecloths, linoleum, doilies, furniture,

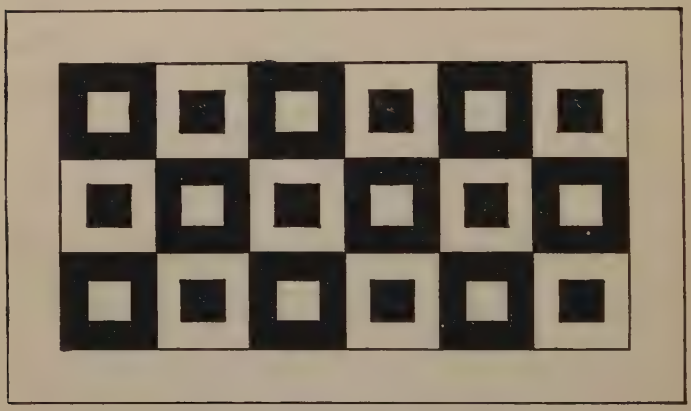

Fig. 26. A Simple Design for Beginning Instruction

towels, napkins, neckties, lampshades, and dozens of other common things can be used to illustrate design and to supply material for its application. The simplest way to begin teaching design is in furnishing a doll house and in making borders for play paper towels, dresser scarfs, and rugs. The best way to begin is by applying design to the making of useful things such as booklets, portfolios, stencils, gift boxes, greeting cards, sofa cushions, and handkerchiefs. Children should be urged to look for new designs and new units in nature, and in their own fancy. Color should be combined with design at an early date, since it greatly heightens the interest in this field.

5. **Lettering.** While all the principles underlying good design apply also to lettering, there are in lettering three special principles that must of necessity be observed if the

results are to be satisfactory. They are: (1) uniformity in spacing; (2) uniformity in slant; and (3) uniformity in height and level. Lettering should usually be free-hand, though horizontal guide lines are permissible. Practice should be confined to words, rather than to separate letters. A good way to begin teaching lettering is to have the pupils cut capitals out of stiff paper or from printed matter in magazines. The letters are then applied to posters, notices, signs, and portfolios. Work with pen and ink can begin in the third grade, the application is to writing titles of compositions, and to lettering posters, cards, and manuscripts.

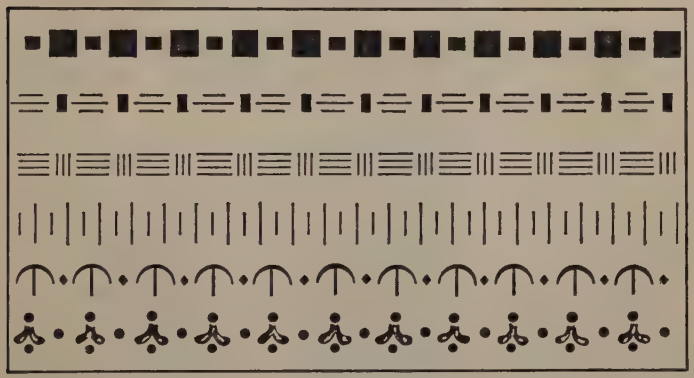

FIG. 27. TYPICAL FORMS WHICH ILLUSTRATE THE PRINCIPLES OF DESIGN

6. Construction. Construction is one of the chief ends of teaching art. In general, the term as used here means the production of useful and beautiful things, though it is also applied to the making of drawings and plans which are later developed into objects. Construction should not be separated from the other divisions of art, as when it is named hand work. Its purpose is the production and enjoyment of beauty just as much as facility in design; it offers the best possible opportunity for the application of drawing, color,

design, and, to some extent, lettering. There is little reason for adopting a strict grading of materials; the interests of the pupils should rule. Raffia work, basketry, weaving, toy making, bookbinding, pottery, and modeling should be taught in every grade if the children desire to learn them.

Countless subjects may be found, the final choice depending to some extent on the materials the teacher can obtain. If she has modeling clay, the making of pottery, animal and vegetable forms, grotesques, and casts is suggested. If she has reeds and raffia, mats and baskets may be fashioned. Woodwork makes an appeal to upper-grade pupils. If none of these materials is available, there is still an opportunity for the teacher to carry out a broad program, as the following list of subjects requiring only paper, paste, and scissors will show:

Book covers	Baskets	Masks
Valentines	Easter cards	Calendars
Gift boxes	Book marks	Birthday cards
Invitations	Place cards	Picture mounts
Blotters	Spool boxes	Notebooks
Trays	Picture books	Headbands
Color books	Napkin holders	Match boxes
Shopping notes	Bonbon baskets	Filing cases
Dolls	Scrapbooks	Portfolios
Menus	Motto cards	Telephone lists
Booklets	Desk pads	Table decorations

Art appreciation. Music and art demand the same conditions for appreciation. There should be relaxation and quiet; there should be freedom, not repression. Neither should be forced; neither should be preached about. Appreciation of art is not likely to flourish among the pupils if the teacher gushes about the beauty of sunsets, landscapes, and portraits. Beauty is to be suggested rather than to be exclaimed over. It is "caught rather than taught."

There are three leading subjects of art appreciation: (1)

nature; (2) hand work, including civic art, such as public buildings; and (3) pictures. Since the advent of the automobile, places of great scenic beauty are accessible to many children. The pupils can be asked to tell what they have seen on trips to such places; they can collect scenic postcards, and they can cut nature views from magazines.

FIG. 28. DESIGN FROM WILD FLOWERS

There is always the possibility of picnics and excursions to near-by places of interest — mountains, glens, waterfalls, lakes, and woods. The civic aspects of art may be stressed by urging children to help preserve places of natural beauty, and to conserve wild flowers, trees, shrubs, and animals. There is no school that lacks a field for this phase of art education; the more remote and isolated the community, the greater the opportunity is likely to be.

Occasionally an art object — a piece of pottery, a Navajo rug, an Indian basket, a piece of lace, a set of napkins — may be found in the community and brought to the school. There is also the possibility of once in a while visiting homes and examining collections of quilts, rugs, wood carvings, baskets, and many other artistic things. Decorative material from the plant world may be collected and exhibited in the schoolroom. School-yard improvement, gardening contests, tree planting, and clean-up campaigns

are phases of civic-art education; deficiencies in these respects indicate lack of appreciation as plainly as does failure to enjoy a great picture.

Picture study. A knowledge and an appreciation of pictures comes from the intimate observation of good ones, rather than from reading and hearing about them. On the whole, it is not advisable for pupils to be asked many questions about a picture that they are studying. The study should not be a recital of details — though it will be if the children are directed, "Tell what you see in the picture." It is better to have them tell why they like a picture, though this is a point that should not be pressed too far, for the greatest enjoyment is likely to be speechless. Pupils may say why they like one picture better than another, or why they think a picture is beautiful. Knowledge of the life of the artist, also, may help to draw their attention to his work, but this is not the most important phase of picture study.

In the upper grades, more consideration may be given to the art qualities. The pupils may learn to look for the center of interest in a picture, for symmetry or balance, for rhythm, perspective, masses of dark and light, contrast, and harmony. They may note the time of day and the season indicated, and the source of light in the picture. They may point out how one picture differs from another, and how the methods of two artists differ.

A lesson plan. A lesson plan similar to the following might be used in teaching appreciation of pictures:

UNIT OF INSTRUCTION: The picture, "The Angelus."
TEACHER'S AIM: To acquaint the children with the picture, and to develop in them an appreciation of peasant life and of reverence.
PUPILS' AIM: To find out what things in the picture suggest reverence.

APPROACH: Here is a picture which tells a beautiful story. The early twilight of autumn has overtaken two peasants at the close of a hard day's work in the field, a long way from their home in the village. In the quiet of evening, sounds are carried a great distance across the plain. As the sun goes down, the church bells begin to ring. The couple stop working. The Angelus is ringing, and it calls them to prayer.

This familiar scene of rural France has been put into a picture by the great artist, Millet. So realistic is the scene that we can easily imagine that we hear the ringing of the bells from the church steeple outlined against the horizon. We are also affected by the spirit of reverence which is revealed in the attitude of these simple working people. If I show you the picture what will it help you to find out? (The things which reveal the spirit of reverence.)

DEVELOPMENT: What time of year is it? (Autumn.) What tells you that it is evening? (The glow in the sky.) Who is shown in the picture? (A peasant man and woman.) What have they been doing? (Working in the fields.) What are they doing now? (Praying.) What suggests that they are praying? (The man has his head bared, the woman has her hands clasped over her breast and her head bowed.) Why are they praying? (The Angelus is ringing from the distant church to remind the people of the birth of Jesus.) What can you see in the picture that adds to the solemnity of the scene? (The level plain, the twilight, the church with its tall spire, the quiet figures against the sky.) See if you can feel the peacefulness of the hour.

SUMMARY: In nearly all of Millet's pictures people are busy doing something. They are pictures of action. Here, however, people are resting from labor; it is a picture of repose. The busy hands cease their work a moment, and the spirit rises in prayer. Many pictures show how labor may be lightened by love. Here we see labor glorified by reverence. When Millet showed this picture to a friend, he at once exclaimed, "It is the Angelus." Do you see why the picture suggests the name?

Pictures for study. Simple pictures for study may be bought for a small sum from *The Perry Picture Company*, Malden, Massachusetts. Modern magazines contain many fine reproductions of great pictures — such, for example, as

those on the cover of *The Literary Digest.* There is considerable advertising which contains some of the very best examples of modern pictorial art. With purchases supplemented by material cut from magazines, the pupils can work out a picture-gallery project like that described in Henry Turner Bailey's *Art Education*, pp. 23–27, and at the same time learn to love good pictures.

The following brief graded list of pictures is suggested for study.

FIRST GRADE

The Brothers
Interior of a Cottage
Feeding Her Birds
Holy Night
Wake Up

SECOND GRADE

Children Catching Minnows
Age of Innocence
Divine Shepherd
Pilgrims Going to Church
Distinguished Member of the Humane Society

THIRD GRADE

The Knitting Lesson
Shoeing the Bay Mare
In Pasture
Departure of the Mayflower
The Little Scholar
The Helping Hand

FOURTH GRADE

Song of the Lark
The Gleaners
At the Watering Trough
Christ in the Temple
John Alden and Priscilla
The Balloon

FIFTH GRADE

The Coming Storm
The Melon Eaters
The Shepherdess
Return to the Farm
The Sower

SIXTH GRADE

Sir Galahad
A Reading from Homer
Joan of Arc
The Pond
Pilgrim Exiles
Oxen Ploughing

SEVENTH GRADE

Landscape With Mill
The Puritan
The Fighting Téméraire
Aurora
The Night Watch
The Minute Man

EIGHTH GRADE

Dance of the Nymphs
Statue of Lincoln
Mother (Whistler)
The Colosseum
Breaking Home Ties
The Sistine Madonna

Summary. Music and art have for their common purpose the expression and enjoyment of beauty. The mental processes involved in learning music are much like those used in oral reading; art is similar to written language. Skills and attitudes of appreciation are more to be sought than knowledge. The laws of learning, also, apply to these subjects. Music should begin with rote singing, art with simple drawing and coloring. From the imitative stage, progress in music should be directed toward sight reading and attentive listening; progress in art toward the principles of mastery and toward attentive observation. Freedom and spontaneity should be conspicuous always. The final outcome of both studies should be the desire and purpose to bring beauty into all the experiences and contacts of life.

EXERCISES AND PROBLEMS

1. In what respects are art and music alike? How do they differ?
2. Is a teacher justified in assuming that a child cannot be taught to sing because he cannot vary the pitch of his voice in the first attempts at singing? Should "monotones" be told to listen but not to sing, as some teachers suggest? Discuss.
3. What is meant by rote singing? Why should music teaching begin with rote singing?
4. To what extent can a teacher who cannot read notes, but who can sing very well by rote, teach music? Suggest a program for some grade for a half year or a year.
5. Define appreciation as applied to music and art. How is it related to the laws of learning, if at all? Does knowledge aid in appreciation?
6. Name a number of suitable subjects for drawing. Is there any advantage in using nature subjects rather than subjects representing the handiwork of man? Discuss.
7. Can a teacher teach art without being skilled in drawing, color, design, and construction? Discuss.
8. Give reasons for stressing construction over drawing and design, independent of their application to useful objects.
9. What subjects of art appreciation can you name besides pictures? How do you account for the fact that picture study is usually meant when art appreciation is mentioned?
10. Summarize the chief points made in this chapter.
11. Prepare a lesson plan for teaching music by means of the phonograph. For teaching an art lesson in design.

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CHAPTER XXI

TEACHING HEALTH AND HYGIENE

Importance of health. There is a distinct recent tendency to give an increased amount of time and attention to health education. As in the days when Athenian civilization was the marvel of the world, the educational ideal has again become a sound mind in a sound body. Rightly enough, the health of the race is the school's first concern. Good health is fundamental to happiness and achievement throughout life. There is nothing that will compensate for its lack or its loss. It cannot be profitably sacrificed for high grades or for worldly possessions. With sound physical health, life takes on worth-while aspects and suggests great possibilities even in a humble environment; without it, wealth, rank, and fame are largely valueless to the individual.

The question of health conditions everything that the school does. In Chapter VIII it was shown that from thirty to fifty per cent of absences are due to sickness. Investigations have also revealed that from fifteen to twenty per cent of the cases of retardation, elimination, and school failures in general are due to ill health and to physical defects. Sickness and physical defects appearing early in life often work permanent injury, detract greatly from adult efficiency, and lead to heavy economic loss. It is estimated that the forty-two million men and women engaged in gainful employment in this country lose an average of eight days each year because of illness. Assuming their average earnings to be only one thousand dollars a year, the resulting loss in wages amounts to more than a billion dollars

annually. This, when combined with expenditures for medical attention, produces a total almost equivalent to all the money now spent for education.

Health conditions. The physical and health conditions of the young people of this Nation, as the World War brought them forcibly to public attention, present a rather alarming aspect. The draft revealed that approximately one in four of the young men called to the colors was incapacitated for the life of a soldier, and General Wood has been quoted as saying that fewer than fifty per cent of the men called to service were fit for line duty. Inasmuch as this statement of General Wood's applied to young men between the ages of twenty-one and thirty-one, it is legitimate to conclude that conditions among the general population were much worse. The amount of misery and inefficiency caused by unfavorable health conditions is inestimable, and it is little to our credit to know that much of it is due to ignorance, neglect, and indifference. A large amount of the blame, doubtless, is to be laid at the door of inadequate health education during the period of childhood and youth. The encouraging feature is that the schools hold the key to the future; that there improvements in conditions may be made and remedial measures may be instituted which in time will change the present unfavorable conditions.

Physical deficiencies are by no means limited to the adult population; a point which emphasizes the teacher's responsibility in looking after school hygiene. Many children, up to the time they enter school, have had no health training of any kind; often their physical condition has been given no attention unless they became seriously ill. As a result, when children enter school, about three fourths of them have physical defects more or less serious in character. The nature and distribution of these defects may be seen from the following table, in which have been brought to-

gether the findings of physical examinations of more than a million elementary-school children.[1]

TABLE XXI. PHYSICAL DEFECTS, ELEMENTARY-SCHOOL CHILDREN

TYPES OF DEFECTS	PERCENTAGE HAVING
Teeth	52.0
Tonsils	22.5
Malnutrition	22.5
Eyes and eyesight	14.5
Nasal breathing	9.0
Adenoids	8.1
Hearing	2.9
Feet	1.1
Skin	1.1
Heart and circulation	1.0
Lungs and bronchial tubes	.9
Nerves	.6

Studies have also been made of the kinds of illness which are responsible for absences from school. Such studies are valuable because they help to awaken people to the seriousness of the problem, and because it is a matter of common knowledge that, with a little precaution, most of these cases can be prevented. Table XXII is based on about eighteen thousand cases, among rural and small-city children, which resulted in over fifty-five thousand days of absence from school.[2]

The school program. Despite its opportunities for constructive service, the school is nevertheless greatly handicapped in the matter of health education. During the six years before the child comes to school many detrimental health habits may be formed, and the child's constitution may become weakened by disease, improper feeding, and

[1] Ralph S. Chambers: *Needs and Practices in Health Instruction*, an unpublished study in the library of Stanford University.

[2] *Ibid.*, p. 30.

TABLE XXII. ILLNESS AND ABSENCE FROM SCHOOL

CAUSES OF SICKNESS	DAYS ABSENT	PERCENTAGE OF ALL CASES
Colds	2.5	25.5
Influenza and grippe	6.0	14.1
Measles	12.2	11.0
Sore throat	2.7	7.2
Digestive diseases	1.9	4.9
Whooping cough	25.2	4.5
Headache	1.2	3.7
Toothache	1.5	2.3
Accidents	2.9	2.3
Scarlet fever	23.6	2.3
Mumps	5.4	2.2
Chickenpox	8.5	1.8
Pneumonia	19.7	1.5
Eye Diseases	3.1	1.4
Earache	2.6	1.4
Skin diseases	4.3	1.3
Tonsillitis	10.4	.9
Diphtheria	17.2	.9
Bronchitis	5.7	.7
All others	5.9	11.1

exposure and neglect. After he enters school, supposing his attendance to be regular, his time in school until he finishes the eighth grade is only one tenth of his total time, or one sixth of his waking hours. The school has little or no control over those matters in his daily life that are the most significant in determining health — namely, eating, sleeping, and cleanliness. Further, the school loses during the long vacation whatever powers of direction it may have had. In addition, the amount of time available for health teaching in the school is quite limited. In the elementary school, from one to two per cent of the time allotment is given to class teaching of physiology and hygiene. This assignment may be increased, however, to about fifteen per cent by properly utilizing the noon intermission and recess periods,

and by correlating health work with the other school activities.

The aim of health education in general should be to develop strong, healthy, and vigorous individuals. The strong should be taught how to maintain their strength; the weak and defective how to improve their condition. In order to insure each pupil's leaving the school as physically fit as nature will permit, three general divisions of health education must be incorporated into the school program. They are:

1. Instruction, including hygiene and physiology
2. Training, including the development of health habits
3. Control of the environment

1. Health instruction. The informational side of health education is more or less beset with dangers. There is sometimes a lack of discrimination between what is useful and consistent with our present knowledge, and what is useless and obsolete. There is also a tendency to set up mere information as the final aim in health instruction. Probably most of the physiology that has been taught, during the last half-century, has been of but small use to any one. Mere familiarity with the names of the bones, nerves, and muscles, and the anatomical construction of our bodies cannot have much effect upon our actual health. The need is for practical material which will give the pupil a higher interest in his body and teach him to take care of it more intelligently, or that will satisfy a natural and legitimate curiosity as to the organization and workings of the human machine.

Imparting knowledge that will satisfy curiosity is justifiable on the same grounds that nature study and much of science instruction are. There is no need, however, for its stopping here. Knowledge may be used to encourage health

habits and to promote a realization of the importance of health. The facts of anatomy and physiology may be employed to teach the importance of proper breathing, clothing, posture, digestion, and exercise. It is easier to form health habits and ideals among pupils if they understand their significance.

The most important type of this information for pupils deals with health conditions in the environment. It consists of facts concerning personal, community, and home hygiene: the care of the sick, accident prevention, how and what diseases are communicated, the milk supply, pure water, clean streets, play and recreation, and the development of preventive measures for typhoid, malaria, tuberculosis, smallpox, yellow fever, diphtheria, and the other diseases which take such a huge toll of human life. Andress gives the minimum essentials of health instruction in the following terms:[1]

1. Ways in which disease is spread
2. What to do in an emergency
3. Common dangers and illnesses, and how they may be avoided
4. What the immediate community, State, and Nation are doing to prevent disease
5. How citizens may coöperate with these social and political groups to promote hygiene and sanitation
6. The nature and value of foods and drinks
7. The nature of alcohol and tobacco, their relation to health (especially to the health of children and youth), and the economic and social results of their use
8. The names and achievements of the leading heroes of preventive medicine

Correlation with other subjects. Health instruction can be readily correlated with other subjects. This is fortunate because by that plan the instruction can be materially increased without loss of time from the other school subjects.

[1] J. M. Andress: *The Teaching of Hygiene in the Grades*, pp. 30–31.

The correlation of health instruction with other studies is valuable also because it helps to develop in the pupils the consciousness that health is less a subject of teaching than it is a manner of living. So strongly are some educators impressed by this theory that they have held that all health teaching should be made incidental to other subjects, but if this were done, there would be danger that language, history, and arithmetic enthusiasts might neglect health teaching altogether. Furthermore, we have now a body of health materials that can well claim a definite place on the regular program of studies. At the same time, connections such as the following should be made continuously:

Subject	Correlation with Health Instruction by
Arithmetic	Selecting accident and health problems for solution, as economic loss on account of poor health, graphs of health statistics, costs of accidents, and similar data.
Civics	Studying the health problems of home, community, school, State, Nation, and world; and becoming acquainted with local and state regulations and laws.
Drawing	Making health posters, growth charts, and maps.
Geography	Emphasizing the health habits and ideals of people living in different climates; health conditions in different countries, localities, and industries; sources of healthful foods; health resorts.
History	Emphasizing the physical endurance of great leaders in war, government, exploration, and business; the effect of epidemics, plagues, and wars; and discoveries having a bearing on health.
Language	Using health topics for oral and written composition, dramatization, debate, and outlines.
Music	Emphasizing the benefit of relaxing while listening to music; of proper breathing.
Nature study	Studying accidents to plants and animals; effects of plant poisons, electricity, the curative effect of sunlight.
Reading	Using health story books, hygiene texts, and mag-

azine articles on health for some of the silent-reading lessons. Biographies of leaders in health work may be used for the same purpose.

2. Health habits. Health habits are more important than health knowledge, and, to tell the truth, health knowledge is useful only to the extent to which it functions in an actual life situation, which ordinarily means as habit. Knowing is not a guarantee of doing; learning facts about the bad effects of faulty mastication, the relationship between cleanliness and disease germs, and the causes of bad posture does not necessarily lead to proper habits of chewing the food, washing the hands, and sitting and standing well. Knowledge, to result in habits, needs to be tied up with motives, such as becoming a more attractive girl, or a strong, athletic boy.

The desirable habits are many, but different schools and different children vary as to which they need to develop. Probably the smaller children are those most in need of good health habits. It will take but a few days for the teacher to observe the chief needs of every individual; she can then shape her teaching program accordingly. A few days after school opens a list of the most important health habits should be prepared and posted. Typical health habits which will probably be found on every list are:

1. Taking a full bath twice a week or more
2. Brushing the teeth at least twice every day
3. Having the sleeping room properly ventilated
4. Getting the amount of sleep suited to the development of the child
5. Drinking milk; avoiding tea and coffee
6. Eating vegetables and fruit every day
7. Taking outdoor exercise daily
8. Keeping clean hands, face, finger nails, neck, and ears
9. Cultivating erect posture
10. Drinking plenty of water every day

Aids in forming habits. The rules for habit formation have been given in another chapter. At this time, let us say: (1) there should be a clear understanding of what ought to be done; (2) there should be a motive provided for doing it; and (3) a check should be made occasionally to see if progress is being made. Many devices are at hand for use: rhymes, jingles, riddles, dramas, posters, booklets, charts, and graphs. These have their place in recitations, opening exercises, and on special days. In addition to these aids there are such methods of fixing and motivating habits as the following:

1. Example of the teacher
2. Inspection of pupils
3. Organization activities
4. Plays and games
5. Weighing and measuring pupils

Example of the teacher. The best results in health training are possible only when the teacher exemplifies what she teaches. In a large western school, a teacher who made physical education her specialty was known to violate all the rules that she prescribed for the pupils. She stayed up late at night; she boasted of going daily without breakfast and ate harmful foods; at times she took excessive exercise, and at other times she would go for several days without exercising at all. Outside of personal cleanliness, almost everything she practiced was at variance with what she taught, and her ultimate dismissal bears testimony to her failure as a teacher.

On the contrary, the teacher who gets the most out of life and does the most for the children will conserve and develop her own health. She should participate in the activities that she recommends to the pupils. She should keep her own weight records with theirs, drink milk with them, play with them, rest with them, and in every way show that she

believes that these practices are not for children only, but for every normal healthy being. She should wear hygienic shoes and clothing. The best teacher teaches health by example, remembering that health as well as disease is contagious.

Health inspection. The custom has become universal of giving a searching physical examination to athletes before they are allowed to enter a contest. It would be a splendid thing if all boys and girls were likewise thoroughly tested to find out whether they are ready for the hard work of the school year. It would be a useful measure, too, because the information would furnish a basis for the individual health programs. In many schools a complete examination is not possible. However, the teacher will be able, within a few weeks, to discover the chief defects in each child and outline simple remedial treatment, or she may recommend to the parents, if conditions seem to warrant it, that the child be taken to a physician. A mental test, if this is feasible, may also help to furnish a basis for the better adaptation of the tasks to its capacity.

Even more important for health work is the daily morning inspection in the school. This will not require more than five minutes. It should include reports from the younger children about brushing their teeth and sleeping with their windows open, and an inspection for neatness and cleanliness. All the children should be observed closely for signs of illness. The teacher should become acquainted with the general symptoms of the more common communicable diseases, such as measles, influenza, mumps, diphtheria, chicken pox, and scarlet fever. It would be well if every school were provided with a box of wooden tongue-sticks for use in examining the throat, and a clinical thermometer for use in detecting fever. If there is an epidemic in the community the teacher should be alert to discover symp-

THE SCHOOL LUNCH A GOOD WAY TO PROMOTE HEALTH

toms among her pupils, and should send the suspected child home or isolate him from the others.

Pupil organizations. Pupil organizations are useful in inculcating health habits and in checking up on practices, for the reason that children are more enthusiastic about activities for which they have the responsibility. The Junior Red Cross plan may be followed, or a special club formed in line with local interests. Suggestions along this line are to be found in the state physical education manuals. The following are typical:

1. Pupil health officers:
   The teacher should appoint, each week or at other appropriate intervals, a sufficient number of pupils (two, four, or six, depending on the size of the class) to serve as "health officers" or "sanitary inspectors" for the class and classroom. If a little care is taken in the initial instruction and subsequent directions, these pupil health officers may render very effective service and stimulate a real interest in the better hygiene and sanitation of the school. The officers may be rated by the teacher, at the end of each term of office, for quality of service.
2. Duties of pupil health officers:
   a. To open the windows wide and air the schoolroom thoroughly every day before the session begins, at the end of every period, and during "relief drills."
   b. To remove chalk, scraps of paper, and other litter from the floor, hallways, stairs, schoolyard, and sidewalk at intervals designated by the teacher. (Not to be substituted for the work of the janitor.)
   c. To consult the room thermometer at appropriate intervals and assist in securing a desirable temperature. (Between 65 and 68 degrees Fahrenheit.)
   d. To help in the plans of the school to keep the schoolbuilding equipment and the premises clean.

Plays and games. A fairly complete program of play activities is given in Chapter IX, so at this time only a few general principles will be mentioned. The belief is that the

play program is a part of the general educational program, with which it must be coördinated. Play periods should be planned for and directed just as carefully as any of the customary recitation periods. While many aims may be justly worked for in the play program the health aim is paramount. Wise grading and systematic adaptation of the activities to individual abilities and needs are essential. Since training is the method indicated, the program will be greatly strengthened if the teacher takes the leadership, or else provides for leadership by older pupils.

Weighing and measuring pupils. Weighing and measuring is another device for establishing good health habits. A set of school scales with a measuring attachment is desirable, but if it is not attainable some means for weighing the children can usually be found in the community. Weighing should be done every month and measuring twice a year — preferably in September and March. Although there is serious doubt whether the common weight-height-age standards are significant indexes of health, if any marked divergences from the norms are found, there should be a thorough examination to discover whether medical attention is needed. It is certain that measuring and weighing encourage health practices and promote interest in health. The United States Bureau of Education will furnish weight and height standards, together with suggestions for making reports, charting results, and improving conditions.

3. **Control of the environment.** School sanitation is the most important avenue to health through control of the environment. There is a hygienic way of sweeping and dusting, and there is a proper method of erasing and cleaning blackboards. Seats and desks should be adjusted to the individual pupils, and all should have the advantage of the best light. Everything should be kept neat and clean. In every room heated by a stove, a pan of water should be

kept either on the stove or so near it that the warm air will be moistened as it rises. One of the most essential items of room equipment is a good thermometer. This should be hung, at a height of about four feet from the floor, on the wall of the room farthest from the heat source. It should be watched carefully to see that the temperature does not rise above sixty-eight degrees. A minimum of sixty-five is desirable, but it should be remembered that a cool room is better than a hot room. Hot, dry air causes restlessness among the pupils, irritates their air passages, and causes sore throat, colds, and headaches.

There is probably not much danger in drafts unless exposure to them be long and severe. In order, however, that there shall be none, each window should be equipped with a board about six inches wide, fastened inside at the bottom and from one side of the window frame to the other, and so tilted that when the window is raised four or five inches the board deflects the air upward. Seats should be arranged in such a way that the light falls upon the work and not in the eyes of the pupils. If sanitary drinking-fountains are not provided, arrangements should be made for individual drinking-cups. Wash basins, soap, and towels are good disease preventers; also, every pupil should be sent to wash his hands before he eats his lunch. There are many other items that should be included in school sanitation, but only a few can be mentioned here. The following hints may be useful in supplementing what has already been said:

1. The classroom should be swept every day. Dry sweeping is unpleasant to the sweeper, spreads dust and germs over the furniture, equipment, and books, and discolors the walls. There it is well to use a sweeping compound. The compound can be made by moistening sawdust with a little kerosene or water. A brush is better to sweep with than a broom.
2. The board should be washed two or three times a year (oftener if necessary) with warm soapy water. Streaking may be

avoided if the board is wiped from the top downward with a soft cloth, such as a bath towel, wrapped around a stick.

3. Desks, seats, tables, and other furniture should be dusted by wiping them with a soft cloth slightly moistened in kerosene or in furniture polish. A feather duster merely stirs up the dust, which soon settles again on the furniture.
4. A seat is of the right height if the pupil's feet rest squarely on the floor when he sits erect against the back of the seat.
5. The desk is at the right distance from the seat when it overlaps it about one and a half inches.
6. The correct height for the desk is level with the elbows of the pupil when he is holding an erect posture, with the upper arms at the sides and the lower arms and the hands extended in front, making right angles with the upper arms.

Special problems; eyesight. The eyes are the most important sense organs involved in the learning process. The children should be examined from time to time for defects, tests of vision given, and conditions and habits watched carefully in order to safeguard eyesight from injury. Pupils should be permitted to move their seats if by so doing they get better light. If a pupil has eye trouble, the parents should be urged to consult an oculist. Special provision should be made for the pupil with defective eyesight by giving him a seat near the front of the room and where the light is best, and by decreasing for him assignments that make a heavy demand upon close application. All such precautions should be supplemented by instruction in the following sight-conservation rules:

1. Take care of the eyesight; upon it depends much of your safety and success in life.
2. Always hold up your head when you read.
3. Hold your book about fourteen inches from your face.
4. Be sure that the light is clear, steady, and strong.
5. Never read in twilight, in a moving car, in a reclining position, nor by flickering and unsteady light.
6. Never read with the sun shining directly on your book.

7. Never face the light in reading.
8. Let the light come from behind you or from over your left shoulder.
9. Avoid books and papers printed indistinctly or in small type.
10. Rest your eyes frequently by looking away from the book.
11. Cleanse your eyes night and morning with pure water.
12. Never rub your eyes with your hands, or with a dirty towel, handkerchief, or cloth.

School feeding. Malnutrition is one of the chief enemies of childhood. It means literally bad nourishment, and that, in effect, means a poorly nourished body. The condition of malnutrition may arise from a number of causes, but frequently it is traceable to insufficient or improper food. Although malnutrition is more prevalent among the children from the poorer familes, there are also many under-nourished children in the homes of the well-to-do. From five to thirty per cent of school children suffer from malnutrition, the condition being found to a greater extent among rural pupils than among those who live in the city. It results in a weakened body and poor school work. Probably the best test is weight; a pupil who is ten per cent or more below his norm is likely to be undernourished. Failure to gain weight in a six months' period is symptomatic of serious ills, and such cases should be referred to a physician.

The school lunch affords a splendid opportunity to bring about an improvement in eating habits and in the selection of foods, and to make some contribution to proper nourishment as well. Children who are unsupervised at the lunch period eat too fast and do not masticate their food properly. In many homes where an excellent variety of food is offered, the children do not select those which are rich in the elements essential for health. Physicians and dietary experts generally agree that the present average diet contains too much meat, starch, and sugar, and not enough milk,

fruit, whole cereals, and vegetables. Children who get plenty of exercise can consume a larger amount of food-energy in the form of starch than those who do not, but they should use little, if any, more protein, than the average pupil. The main point is to lead the pupils to eat what is good for them, not merely what they want.

The school lunch has several positive values. Good manners and right habits of eating may be taught; the pupils, and indirectly the parents, can be shown what constitutes well-balanced meals; and the worst evils of malnutrition may be combatted. The noon lunch is the chief thing to consider, but there is a rapidly developing tendency to favor providing a mid-forenoon and mid-afternoon lunch for at least all undernourished pupils. Some hints for managing school feeding are:

1. Interest some local organization, such as the parent-teachers association, in the problem, and get them to furnish the necessary facilities and the supplies.
2. Serve at least one hot dish every day. A good vegetable soup, chocolate, milk toast, rice, and milk are favorites.
3. Require the pupils to wash before eating, and have them all remain in the lunch room for at least fifteen minutes.
4. Take a little time, the first day or two, to give instructions in table etiquette and in good habits of eating.
5. A little lively entertainment can be brought in occasionally by the committee on program.

Mental hygiene. Health is not a matter of a healthy physical organism alone; it includes wholesome interests and attitudes. A child may have a sound body and observe the rules of physical hygiene, and yet be flighty, unstable, irritable, depressed, and unhappy. Nervous strain, sleeplessness, lack of appetite for food, and inability to concentrate are symptoms which may culminate in a breakdown. Nervous disorganization, undue suggestibility, and hysteria

are incipient in perhaps as many as one tenth of the population. So long as these individuals live quiet, orderly lives, and so long as they are not subjected to great excitement or severe crises, they are able to go along about their tasks in a normal way. If they are subjected to unusual experiences, however, they lose the power of controlling their conduct, and may become permanent nervous wrecks.

Prevention is the purpose of mental hygiene — something which cannot be taught easily in formal classes. First, all worry should be eliminated. It is a bad thing to have children upset about examinations; they should also be protected against bullying, teasing, and nagging. School work should be adjusted to the varied interests and capacities of each pupil. There should be freedom of emotional expression in art, music, drama, play, and social life; there should be no overindulgence in day dreaming, movies, dancing, and late hours. Emphasis should rightly be placed on the satisfactions of good health; mention of diseases and symptoms tend to produce a morbid outlook. It should be remembered also that facts are soon forgotten, while attitudes are likely to be permanent. One of the values of the complete physical examination is that it brings defects to the pupils' attention for a short time and then allows them to be forgotten. It is not well to center too much attention upon personal ills and weaknesses. A positive program of recreation, joyful work, wholesome food, sleep, and rest, a kind and understanding teacher, parents who are not overindulgent, and discipline that is not too rigid — these are the principal items to remember as essential to mental hygiene.

Tests and teaching materials. Results cannot be measured, in health education, exactly as they can be in other subjects. The real test is the physical condition of the pupils, though, of course, the records of successive examina-

tions and charts of weight and height furnish indexes to improvement. A smaller number of defects, fewer absences from sickness, the establishment of health habits, and increasing participation in invigorating activities reveal more of real value than do the best standardized tests of knowledge. There are in addition two standard tests which may be used advantageously: namely,

Gates-Strang: *Health Knowledge Test.* For grades 3–12. Bureau of Publications, Teachers College, Columbia University, New York. This aims to measure knowledge of many phases of healthful living. Consists of 520 items and exercises. 90 pp.

Payne: *A Scale for Measuring Personal and Social Behavior.* For grades 1–8. Public School Publishing Company, Bloomington, Illinois. This device covers such topics as food, air, drink, exercise, sleep, posture, cleanliness, clothing, indications of health, safety habits, and service. May also be found in Payne's *Education in Health*, pp. 229–43.

Summary. Health education ranks as one of the most important subjects in the curriculum. Condition in school and in life indicate that there has been woeful neglect in teaching the simplest elements of health and hygiene. Physical defects are found in nearly all pupils; none is free from sickness at some time in his school life. There are three features to stress in the educational program: (1) instruction, (2) training, and (3) control of the environment. Instruction should provide knowledge that will satisfy legitimate curiosity about bodily structure and function and should lay the foundation for school, home, and community campaigns for health improvement. Training has the formation of good habits as its objective; environmental control has to do with the securing of sanitary conditions as influenced by air, temperature, light, comfort, correct posture, and safety from contagion. The outstanding

special problems of school hygiene are school feeding, conservation of eyesight, and mental health.

EXERCISES AND PROBLEMS

1. List all the reasons you can why it is the teacher's duty to look after the pupils' health.
2. List all the agencies, other than the school, which serve to promote health.
3. Based on the excuses for absence brought by your pupils, make a graph of the causes, showing the percentage represented by each.
4. Justify the teaching of accident prevention and first aid.
5. Prepare a list of health topics which would make suitable subjects for use in language instruction.
6. Justify the use of health material for the reading lesson; for the arithmetic assignment.
7. Outline a plan for a pupils' health club.
8. List the advantages derived from regularly weighing and measuring the pupils.
9. Prepare an argument to convince a father and mother that their child should have adenoids and enlarged tonsils removed.
10. How can you arrange to have a hot lunch at noon in a rural school?

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CHAPTER XXII

DIRECTING SOCIAL ACTIVITIES

Importance of the social program. In the school of the past generation discipline and knowledge were the chief objectives, ideas that have been well expressed under the title "Lickin' and larnin'." Although book learning is not neglected in the newer type of school, it is realized that there are many things of importance which are not to be learned from books. Especially is it recognized that the school should be a place for happy, healthful living, where the best of the life of the community is reproduced in a natural and attractive way. The trend, to-day, is strongly in the direction of the actual living in the school of real and vital experiences. It has been recognized that "the whole child goes to school," not only that part of him which is concerned with memorizing and fact-getting. His physical, moral, and social needs must also be cared for.

The effect of the changed attitude has been beneficial. Children prefer to go to an active, socialized school. Parents to-day have a new appreciation of the value of the school as an institution, partly as the result of the more enthusiastic comments of the children, and partly because they see a positive improvement in these children's attitudes, interests, and conduct. Parents are quick to observe broadened interests and a more generous program of activities. School superintendents and school boards are selecting teachers who are in sympathy with the new ideas and who know how to direct clubs, societies, and associations, and how to manage leisure-time occupations. Every teacher should know, when she begins her teaching, how to

supervise at least three or four social activities, and during each year of her experience she should learn how to direct at least one new activity.

Examples of activities. This requirement does not seem excessive when the large number of suitable activities is considered. In a recent study over eight hundred were listed under two hundred different groups. Those which occurred most frequently were:

1. *Civic-social-moral:* civics clubs, honor societies, assemblies, class organizations, social-service clubs, welfare societies, student councils
2. *Physical and athletic:* dances, games and sports, athletic associations, first-aid clubs
3. *Scientific:* science clubs, bird clubs, flower clubs, radio clubs, chemistry clubs, nature-study clubs, garden clubs, aircraft clubs
4. *Musical:* choruses, glee clubs, orchestras, bands
5. *Arts and crafts:* camera clubs, poster clubs, sketching clubs
6. *Debating and journalistic:* debating societies, discussion clubs, press associations, annual staffs, school papers
7. *Geographical and historical:* local history clubs, travel clubs, excursion clubs, stamp clubs
8. *Home economics:* embroidery clubs, cooking clubs, sewing clubs, crochet clubs, millinery clubs, knitting clubs
9. *Commercial and industrial:* industrial clubs, agricultural clubs, penmanship clubs
10. *Library and literary:* literary societies, reading clubs, story hour clubs, library clubs
11. *Miscellaneous:* scenario clubs, drama leagues, puzzle clubs, cartooning clubs, woodcraft clubs, thrift clubs, scrapbook clubs

Principles underlying selection. With so many things to select from it is hard to tell what is best. In general, there ought to be a sufficient number of activities for every one to have something which interests him. Second, the program should be on the child level; those which appeal to adults and to normal school and college students are seldom

satisfactory for children. More specifically, there are four principles which will help the teacher to decide what ought to be included in the activities program:

1. *The principle of use.* This has to do with selecting the activities which appeal most strongly and to the largest number, and also those which will function longest after school days are over.
2. *The principle of interest.* As has been intimated, this principle is concerned with the selection of those activities that are adapted to the particular stage of development in which the children are found. A large number will have to be chosen in order that individual differences shall be met, and new ones taken on and old ones dropped as the children change.
3. *The principle of expediency.* In the carrying out of this principle, only those activities which meet the approval of the school authorities and the parents will be permitted. Preference will be given to those which can be taught the most successfully, teacher, children, time, and equipment being considered.
4. *The principle of educational value.* This involves selecting activities which supplement and strengthen the regular school subjects, develop special talents, give a chance for leadership and initiative, and make the regular work of the school more vital and interesting.

Educational values. The last principle — that of educational value — deserves further consideration. Since the social program may become expensive in the time of teacher and pupils, it should possess real educational values. It should contribute, in the same way that the ordinary subjects do, to knowledge, skills, and ideals. The following analysis and illustrations will help to make this principle clearer:

1. Activities should be related to subjects in such a way as to motivate the learning. Reading clubs, science clubs, and history clubs are good examples.

2. They should afford some opportunity for studying subjects not found in the regular course of study. Choruses, orchestras, bands, manual training, drawing, and radio are examples.
3. They should develop special talents which otherwise would be neglected. Leadership, music, art, public speaking, and dramatics are illustrations.
4. They should make for closer coöperation among the pupils and between pupils and teachers; they should promote school spirit and develop pride in the school. Assemblies or opening exercises, welfare clubs, service societies, and athletics may be cited here.
5. They should promote good citizenship by training the pupils for the wise use of leisure and for the duties of social and civic life. Clubs, welfare leagues, music, student government, and the school paper help to realize this objective.

Introducing the program. The method and plan of work will depend in a large measure upon the age and development of the children. Older pupils who have had experience in self-directed activities can attempt a great deal; younger children and the less experienced must be confined to a more limited program. A start may be made through the opening period, and from this the development may take in many forms of clubs and societies as the teacher becomes acquainted with the abilities and interests of the pupils. A library club of the type that will be described later is popular, as a rule, and is easily managed. Clubs for the study of music, art, and nature are equally practicable.

Practice in school service can best be provided through committees. At first, volunteers should be called for to look after some of the necessary work of the classroom. In an ordinary class there might be committees on:

1. *Room neatness and order.* This committee would see that books are kept straight on the shelves, and that the floor, desks, board, and tables are free from paper waste and marks, and in general are neat and clean.
2. *Messengers.* This committee would be useful in taking mes-

sages to the principal, going on errands to the library, acting as guides to visitors, and giving service in other and similar ways.

3. *Safety.* The safety committee should lead lines at fire drill, report dangers in the schoolhouse, playground, or equipment, and collect materials on safety instruction.
4. *Bulletin board.* This committee would have the duty of deciding what shall be posted on the bulletin board, and of removing old material when it has served its purpose.
5. *Social.* The social committee would receive visitors, welcome new pupils, and help plan class parties and special programs. It might also be responsible for good manners and etiquette.
6. *Welfare.* The welfare committee would make reports concerning sick pupils, take flowers and messages to them, help them make up their work when they return to school, look after ventilation, and make suggestions for the good of all the students.

As children make progress in initiative and in carrying responsibility, the number of committees may be increased until each pupil holds an office. Likewise, all should serve under a leader. Terms of service should be short — in the elementary school from two to three months, in the junior high school for not more than half a year. Interest will be keener and results better if the membership of committees is changed frequently. Teachers are inclined to pick out the best pupils and keep them continuously in the responsible positions, but this practice prevents the development of leadership ability in all. No teacher thinks of restricting spelling and arithmetic to the best pupils; nor should she limit social advantages to the capable.

Formal organization. As soon as the pupils show some capacity for management, a more complete and formal organization should be attempted. This is done, as in the case of the parent-teacher association, by appointing committees to draw up rules and regulations and by holding regular elections of officers. The activities should also be

planned with especial care, with some discussion of what are the best to choose, and the final decisions reached by voting. All the pupils should belong to the class organization, and in addition to some smaller special club. The teacher should keep herself in the background during the meetings. One of the chief values of social activities in the school is the growth of spontaneous interests, and one of their chief charms to the pupils lies in the fact that they offer so much greater freedom of action and expression than is found in the class recitations. Inexperienced teachers will be surprised at the capacity that little children show for self-government; clubs and societies make a strong appeal as far down as the first grade.

In a certain village school of six or eight rooms, the teachers tried the plan of having the pupils organize a city for each room. The children studied city government and then elected their own officers. One of the rooms was known as "Fruit City" — the school being located in an area where orcharding was the most important industry. The name of the city was placed over the door leading to the hall. The aisles between the seats were named "Cherry Street," "Orange Street," "Walnut Street," and so on. The first pupil in each row of seats saw that his street was kept clean and free from litter. Other pupils served on the city board of health, the library commission, the park commission, the playground commission, the good government league, and the city planning commission. It was a very interesting experience for a visitor to be met at the door by the "Mayor," told the name of the "town," the names of the officers, and given a sketch of the improvements which had been made. On the bulletin board were posted the "laws" which the children had drafted and adopted. This interesting organization motivated the work of the school for a whole year.

Recognizing service. The law of effect applies just as truly to social activities as it does to the learning of arithmetic and reading. It is highly advisable to give credit to pupils for what they do for the school and for their achievements in clubs and teams. Parents are always proud to know that their children are leaders in the safety squad, in school government, in health supervision, and in the many special fields such as the orchestra, debate, dramatics, and club work. Recognition is also of first importance to the children. It stimulates and rewards those who have accomplished something, and offers a motive to younger pupils who are just beginning to participate in social activities.

There are many ways in which the deserved recognition may be given. One of the first is by using a title for each office of importance. Captains for leading the lines, health sentinels for watching the ventilation, and custodians of property for collecting and distributing supplies are examples of these names. From the fifth grade up it is well to imitate city, county, state, and national organization, with the officers named mayor, treasurer, commissioner, supervisor, secretary, and president. All officers appreciate receiving special notice, such as being pointed out to the principal and to visitors. Some teachers give service stars or points, and post the names of the most worthy on the board. Others make favorable mention to the parents on the monthly report card; some present letters and emblems on the vote of the class. With any of these plans, it is well to have toward the close of school a "recognition day," at which time a special program is given and the contributions of each pupil for the term or the year are read.

Social projects illustrated. Discussions of what to do and how to manage are not so convincing as accounts of what has been done. There is an increasing body of material on the subject, some of which is cited in the references at the

end of this chapter. Of the many illustrations, the following have been chosen to offer here as within the scope of the typical school:

1. In a school where self-expression was much to be desired, the sixth grade was permitted to issue a school paper twice a month. Mimeographing was paid for by subscriptions, and advertising was secured from people in the village. The pupils furnished all the copy, including personal items, community news, school news, feature articles, jokes, verses, stories, and editorials.

   A classroom paper may be written in longhand or, better still, on a typewriter, if one is available. The authors of this volume know a school where the fourth grade put out a weekly "newspaper" on a large bulletin board set up in the hall. Everybody in the school reads this paper.
2. A seventh-grade class cordially disliked the adopted textbook in history. The teacher suggested that a dramatic society be organized to give historical plays. This was done, and the pupils wrote and presented plays centering around the lives of Columbus, Raleigh, Cortez, Washington, Franklin, Miles Standish, and William Penn. In a few weeks the dislike of history in general, and even of the objectionable textbook, was overcome.
3. A library club was the outcome of the work of a fifth-grade class in reading. The pupils kept lists of everything they read, and these lists were posted on the walls of the classroom. They also collected from librarians, publishers, and teachers lists of suitable books for the fifth grade, and from this list they selected most of their reading. An alcove in an adjacent unused room was named the library, and there the children were allowed to go unsupervised when they had finished their other work. Books were obtained from every available source; magazines were searched for poems, stories, and pictures, and the material was pasted in the school scrapbook. This project created in the pupils a love for reading and taught many of them how to use their leisure wisely.
4. In a pioneer community the teacher of the upper grades led the children in organizing a local-history society. The first event of importance was the attendance of the club at the

annual "Camp Fire" of the pioneers of the community. The next project was collecting a library of pioneer stories and books dealing with state history. Programs managed by the pupils included a stereopticon lecture on state history given by a member of the extension division of the state university, a pioneer program at assembly, a school "Camp Fire," and a "singing bee" at which old-time songs were sung. Two of the pupils participated in the local-history writing contest sponsored by the state university. As a means of creating interest in history and in the community, and of developing a favorable attitude toward the school, nothing better than this type of activity is to be found.

The school library. Of all the activities outside the range of the restricted list of subjects the library offers the greatest opportunities. It can be used to develop the reading habit in children. In time it teaches discriminative reading, which is a much needed accomplishment in these days when so much that is worthless is being published. It can be used for training pupils in independent study; and the use of it furnishes the best preparation that there is for advanced work in high school, normal school, and college. It is the best means of providing for individual differences, especially of giving the superior pupil a chance to go ahead as fast as he can. Finally it is of value in relating school and community and in bringing all educational agencies into harmony and more complete coöperation for furthering the interests of the children. All of these points may be included more specifically under three important headings:

1. The library adds to the variety and interest of the school. A superintendent has said in this connection that one of the chief causes of dullness, lack of life, want of interest, and impracticality in the average school is the lack of good books. A library makes a school vital and inspiring.
2. The library promotes real education. It offers the best means there is of teaching reading and establishing the reading habit. If children are trained to read, and have a love of reading

instilled into them, their education is practically assured. Pupils who do the most voluntary reading are those who, as a rule, make the best grades on standard reading tests and know the most about science, literature, history, geography, invention, and present-day affairs. Not only does the reading habit benefit children during school days, but it carries on into their lives and it makes education a continuous thing for them — which, in this rapidly changing world, it ought to be.

3. The library is a source of inspiration and an important agency in furthering the worthy use of leisure. It brings relief from the humdrum cares of the day, and transports the reader into the wonderful land of romance. It stimulates achievement by portraying the things which have been accomplished, the obstacles which have been overcome, and the compensations which have been won. It is the strongest rival of the picture show and the vaudeville show, the cheap and questionable amusements of the great city, and the dull monotony of many rural neighborhoods.

Preliminary steps in library development. What the teacher can do in the way of developing a library will depend upon what has already been done, upon the age of the pupils, and upon the facilities in the way of books and room that are at her command. For present purposes let us assume that the pupils have had very little library experience, and that the books and the place facilities are about average, which will mean a collection of from twenty to fifty books for each classroom, a dictionary, a few general reference books, a bookcase, and a reading table. In many schools there is also the possibility of buying new books every year, or of borrowing from a central city, county, or state library. With such conditions, one of the first things to do is to present to the children the problem of building up a good library, and of using it effectively.

Next set aside a place in the classroom for library use. A corner of the room that is well out of the way, and where

the light is good, will do very well. It should be furnished with a bookcase, a reading-table, and a few chairs. Not much space nor a great deal of equipment will be necessary. The writers know a schoolroom which has splendid library service, in which all the equipment, including a screen, bookcases, benches, table, and reading lamp, were made by the pupils. In another school, a class utilized the closed end of a near-by hallway for their reading-room, and supplied all the books and furnishings.

The next step should be to teach the pupils how to care for books — how to open them, how to cover them, and, in general, how to preserve them. At this time, two or three volunteers for library service may be called for, or the children may be permitted to elect a class librarian. The librarian should perform such duties as keeping the books straight on the shelves, and repairing them; training beginners in using indexes, tables of contents, and the dictionary; finding material in reference books and magazines; and keeping a record of books lent to pupils. Pupils should be permitted to use the library as soon as their other necessary work is finished. They should be cautioned to be quiet and orderly, and to return books to their places. Making a visit to a public library or obtaining a description of a large library will add to the value of the library project.

Library training. As has been said, one of the first library duties of the teacher is to train pupils in the care of books. Even in the kindergarten, the children should learn to turn the leaves of picture books without tearing or soiling them; they should learn, too, that the backs of books must not be broken or the covers defaced. This applies to textbooks as well as to library books. Topics that should be specially emphasized are the thrift idea, the need of respecting public property, how a book is made, and kindred subjects.

Several other important library lessons are necessary.

Although these are often connected with the reading period, it must be admitted that they can be learned very successfully in the library period, and while serving as librarian. It is an old saying that one learns by teaching. Many a boy and many a girl will learn how to use the dictionary in helping some one else to do so when he or she would not learn it alone. Pupils should be "letter perfect" in the following list of library lessons by the time they leave the school. The grade references are suggestive only, and need not be followed:

1. How to use the Dictionary	Fourth grade
2. How to find materials in a book by using the index, table of contents, and page references.	Fifth grade
3. How to use the encyclopædia.	Sixth grade
4. How to use the library catalogue.	Seventh grade
5. How to take notes and make and use references to materials in books.	Eighth grade

Training in the use of magazines and newspapers. Almost all Americans are readers of newspapers and magazines. They are available to every one. The average person is likely to depend far more upon this kind of reading material for information and entertainment than upon books. Moreover, it is a well-known fact that the majority of readers put great faith in whatever they find in their favorite magazine or newspaper. Daily life is probably influenced more strongly by current reading than by anything else. The teacher, therefore, has a chance to perform an important and vital service by teaching children discrimination and judgment in the reading of the daily news. The best way to do this is through regular instruction in the current-events period, or by combining current events with reading, history, civics, geography, or some other subject. For the most part, it is not of much value to have children formally report their reading of minor happenings, such as

accidents, deaths, and social affairs, but even in this unpromising field there is a chance to teach children to distinguish between the important and the unimportant. By using one or more of the devices given below, the teacher will be able to make current events serve an educational purpose:

1. Connect them with such other subjects, as science, hygiene, history, geography, literature, reading, and arithmetic.
2. Give special assignments, each pupil or small group following the same topic through the year.
3. Have the pupils collect and organize pictures, charts, and printed materials about such large subjects as highways, relations with Japan, European debts, the League of Nations, and commerce and trade.
4. Encourage club activities — such as the "Clipping Bureau," the "Keep-Up-To-Date," society, etc.
5. Have the pupils make scrapbooks and informational booklets from clippings.
6. Organize debates and discussions on current topics.
7. By having compositions, free reading periods, and assignments in the regular reading class.
8. By using the bulletin board for clippings and summaries of news.

Interest in current materials. Interest in current materials is as strong as interest in books. Many teachers seem to feel that unless reading materials are "literary" and bear the stamp of adult approval, children should not be allowed access to them. This is a mistake. Children will certainly read current literature. Why should not the teacher help them to do so in the best way possible?

In any case, the materials found in such magazines as *Popular Science*, *Popular Mechanics*, *Radio*, *The American Boy*, *The Youth's Companion*, and *The Literary Digest* fully equal, in learning-to-read values, the materials found in the best collection of pure literary material available. In addition, good magazine articles usually possess social values far

superior to those of the vaunted classics. Consider the following list of titles, culled at random from magazines of the past ten years, and notice their interest appeal and the practical information that they promise. Probably there is more vital reading matter in a year's issue of any worthwhile magazine than in any textbook in reading. Children like to read such selections as these:

"How Birds May Save a Billion Dollars' Worth of Foodstuffs a Year"; in *The Outlook*, vol. 132, pp. 345–46. (June 21, 1922.)

"Map-Changing Medicine"; in *The National Geographic Magazine*, vol. 42, pp. 303–30. (September, 1922.)

"Camels, Cows, and Tobacco"; in *The Literary Digest*, vol. 78, p. 31. (July 7, 1923.)

"A Billion Dollar Bandit" (The Boll Weevil); in *The Outlook*, vol. 133, pp. 140–42. (January 17, 1923.)

"Land Hunger"; in *The Living Age*, vol. 316, pp. 417–25. (February 17, 1923.)

"The Social Menace of the Rat"; in *The American City*, vol. 27, pp. 431–33. (November, 1922.)

Motivating reading. It will be an unusual school group which does not contain several pupils who are habitual readers independent of the effort of the teacher. Nevertheless, it will be a problem with many teachers to get the reading habit established, and even the inveterate readers will probably have to be directed to better and more useful material. In the last few years teachers have worked out many devices to motivate reading, among which we may mention:

1. Supplying list of books. The room librarian posts, as a suggestion of what to read, lists of new books or books which have proved popular.
2. Giving direct oral advice on what to read. Investigations show that pupils choose most of the books they read on the recommendation of other pupils. The teacher's influence has least weight of all. Here is an opportunity for her to extend her influence — by relating short incidents from worth-

while books and then suggesting that the children finish the stories for themselves.

3. Having pupils keep lists of their own reading, and post the lists every month. Votes may be taken on the half-dozen most popular books, and the titles posted.
4. Having pupils give oral reports on what they read, with reasons for liking any particular book. By this means those who did the reading are stimulated to read further, and the others get an idea of what the books are like.
5. Giving special reading credit for work done outside the class. This plan may be carried out by making up book or reading lists, with from ten to twenty-five points assigned for each selection. As pupils read and report they are credited with the points they have earned, and their records are kept posted. Rivalry combined with publicity acts as a strong motive for further reading.
6. Giving other forms of recognition: gold stars pasted on a poster opposite the names of the pupils, with a star for each book, and certificates at the end of the year signed by the teacher or the principal.
7. Using vacation reading as a project. Pupils register for this as for industrial club work, keep a record of the books they read, and are given credit in reading.
8. Organizing reading clubs. Programs may be adopted, reports made, and certificates issued.
9. Planning reading programs about special days. Stories about Thanksgiving may be read, and an award made for the best composition on the subject of the day. Other holidays may be similarly studied. Christmas stories told around the Christmas tree make an interesting program for a small school.
10. Planning book-week programs, with exhibits, stories, announcements of books and stories, phonograph music, colored pictures, and scrapbooks made by the children. With plenty of games, add variety, these events make for happy associations with books and reading.

Library projects illustrated. The possibilities in library use are almost unlimited, nor is the smallness of the library a serious handicap. Good readers and good books are the

only essential elements for a library. A good book will bear re-reading many times. In both rural and city schools, teachers are showing much ingenuity in developing these interests and keeping pupils active in them. From the numerous reports of what has been done, we have chosen a few to make a summary:

1. In a city school, one reading group introduced the discussion of movies and other plays which the members had seen; another became interested in biographies. Still another group became interested in bibliography, and made bibliographies for several months. This group also started a circulating library. The initiation fee was a book; the volumes could be borrowed at five cents a week. (Sixth to ninth grades.)
2. In preparing for book week, the pupils prepared posters, gave talks, arranged book exhibits, and wrote announcements for the school paper. A play was staged on how to care for books before the class. The usual library hour was devoted to music and story-telling. The class in art prepared book-week posters and book-marks and covers, which were judged and awarded prizes. An essay contest on "The Best Book I Have Read" was conducted by the parent-teacher association.
3. In a certain village school, the library club elects officers who conduct the meetings. The program consists of recitations and of short reviews of books read and enjoyed. Music and story-telling make up the other features of the program.
4. In a small village school, the sixth grade decided to put in a library of its own. A small room about ten by twelve adjoining the classroom was obtained for the purpose. The girls in the domestic science classes outlined a plan for fitting up the room, and the boys did the work under their direction. One pupil brought a contribution, an old mission-type reading lamp; a dilapidated table was dragged out of the basement, repaired, and newly painted. The girls made curtains for the windows; the boys built several bookcases. Chairs were collected from around the building and painted to match the table and the bookcases.

   After the room had been made ready, the pupils commenced to collect books. Donations were secured from many

sources. Many of the children brought their own books, and magazines were brought in as soon as they were read at home.

5. The special-day idea was turned to account in story hours. One day was designated as hero-story day, one as boys'-story day, another as animal-story day, and so on. When interest lagged there was a humorous-story day and an adventure-story day. Other days may be planned about pioneers, Indians, gold discovery, hunting and fishing, adventure, sea stories, and games and sports.
6. A story-hour program weekly or twice a week has been worked out successfully in many schools.

Summary. Social activities are taking an increasingly larger proportion of the school day, and teachers who can direct club work, literary societies, library work, and the many other types of group work are greatly in demand. Activities should be selected for their interest to the pupils and for their civic and educational values. The program should be introduced with informal committee work, connected with simple school duties. Later on, formal organization may be attempted, with by-laws and officers. Service to the school should be recognized by praise, honor rolls, letters, and awards. The most effective social agency is the library. Even a few books and magazines increase the interest in the school, promote real education, and help to establish worthy life habits. Library training should create reading interests, teach pupils the use and the care of books, and develop in them the ability to read current materials with discrimination.

EXERCISES AND PROBLEMS

1. Give as many reasons as you can for introducing club and group activities.
2. Suppose a group of eighth-grade girls want to have instruction in folk dancing in the school. Suppose there is a strong sentiment among the parents against dancing in any form. What course should the teacher take under such circumstances?

3. Explain how a classroom teacher with thirty or forty pupils in her room, and from fifteen to twenty-five recitations a day, can find time for such social activities as a school paper, dramatics, clubs, and library periods.
4. Prepare a suitable report-card form containing a record of the social achievement of the pupils. Do you think the parents would value such a report? Discuss.
5. Name the chief values which may be realized through the school or classroom library.
6. Suppose you were given the responsibility of buying a small collection of books, say a hundred volumes, for a fifth- or sixth-grade room. Explain how you would make your selections.
7. Suppose you were asked to recommend half a dozen interesting books for a twelve-year-old boy of good intelligence. What books would you recommend? For a twelve-year-old girl? Give reasons for your choices.
8. Give reasons why special attention should be given to newspaper and magazine reading.
9. Why is motivation of library work necessary? Is it necessary after the reading habit has been established? Discuss.

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CHAPTER XXIII

HOLIDAY AND SPECIAL PROGRAMS

Value in special occasions. In a previous chapter, the beginning teacher was told how to prepare her daily program. Important as this regular schedule is, it does not comprise all the activities of the school. Many things must be done which make up what might be called the special or non-routine features of the school. As examples, we have already considered the extra-curricular activities. To a considerable extent the school library work falls into the same classification. There is also a variety of social and educational activities which are engaged in at longer intervals, and especially on days and weeks set aside for special observance; these are holidays, festivals, celebrations, and drives.

The beginning teacher should not underrate the value of these special occasions. Vital lessons which endure for life are often taught at such times, and a vividness and a reality may be put into the teaching on these occasions that makes one special day worth more than many ordinary days, with their more or less formal, routine events. This is particularly likely to be true with respect to moral and civic instruction. Leading men and women have stated that the basic impulses leading to their success in life were gained through the vividness and emotional appeal of special school events. Some of the important by-products of special-day observance are the following:

1. Motivation of the work of the regular days. This is achieved by making regular school work a subject of display on the special occasion, by giving the better pupils a place on the special program as a reward for good daily work, and by developing interest in regular classes by means of anticipating

future pleasure of special days. Almost all pupils will study better under the idea: "We must get this spelling or this arithmetic well done, so that we can enjoy the picnic or the play next week."

2. Promotion of general education through using regular subject-matter. In preparing for a program the pupils may advance themselves in English, history, music, art, science, or any other subject.
3. Development of community interest. The children report to their parents the pleasure they are having in school. The parents visit the school on these special days and thereby become better acquainted with the teacher and the work of the school.
4. A wiser use of leisure. Moments which might otherwise be used by the children in idling, in the company of bad associates, or in other objectionable ways are filled with purposeful activity under the stimulus of practice for the occasion. The interest in dramatics, music, literature, and history thus obtained may carry on into after-school life.
5. Better citizenship secured through the training provided in coöperation, team work, loyalty to the school, and service to school and community.
6. Special talents brought to light and given a chance to grow.
7. A satisfying variety given to the school life that makes it more attractive and pleasing. The result is often better attendance, fewer withdrawals from school, and a more favorable attitude toward school support.

What special occasions to observe. There are so many occasions that might be observed that it would be possible to make almost every day a special day. However, in order not to overdo this aspect of school life, and in order at the same time to make sure that the really necessary events are not overlooked, the teacher should plan as early in the year as possible her schedule of special events. She can do this planning with more surety if she is acquainted with the community. In deciding what occasions to observe, a number of matters must be taken into account.

First, the teacher should know what days and weeks are

set aside for special observance by the state law. In some States, only two or three days are designated; in others there are no fewer than a dozen. To the required days, she may add others that seem appropriate for her school. It may not be wise or possible to observe all of these days. Doubtless a fair average is one a month. The teacher may, however, provide for some alternation; thus Columbus Day may be observed every other year only. This plan will be further modified by what grade or grades she may be teaching. An investigation into common practice shows the following special days and weeks to be the ones most frequently observed. A list sufficiently large to select from is offered, though a teacher may wish to add an occasion or two of local significance.

Special Days [1]	Special Weeks
Columbus Day	Kindness to Animals Week
Thanksgiving	Education Week
Christmas	Thrift Week
Lincoln's Birthday	Health Week
Washington's Birthday	Better English Week
Arbor Day	National Safety Week
Memorial Day	Children's Book Week
Independence Day	National Song Week
Labor Day	Forest Protection Week

Special program requirements. The programs prepared for special days of course vary with their purposes. If education of the children is the main objective, there will be one type of selection; if entertainment of the community or of another school class is the aim, another type of activities will be required. Although the programs should not be

[1] Other days which are sometimes observed or related to school work are: State Day, Valentine's Day, Armistice Day, May Day, Fire-Prevention Day, Pioneer Day, Patriots' Day. Georgia keeps Uncle Remus Day on December 9; Vermont Battle of Bennington Day, on August 16.

allowed to become dull and uninteresting, mere entertainment should seldom if ever be the sole aim. Such a practice, if carried to the extreme, can mean nothing else than exploitation of the children. In a general way, just as the daily program must be alive and stimulating, so should the special day's events be full of action and vitality. In order to get the proper balance between the significant and the unimportant, each program should be prepared to satisfy these principles:

1. Timeliness. A Christmas program, for example, should be in accord with the meaning and spirit of the day.
2. Coherence. All numbers should be related to the controlling objective, each in such a way that its place there can be easily perceived and justified.
3. Adaptability. The numbers should be on a level with the abilities and interests of the pupils; in other words, the assignments should be well graded.
4. Variety and interest.
5. Educational value.
6. Breadth of opportunity. The arrangement should be such that many pupils will have a chance to participate.

Suitable activities. A study of many typical special-day programs reveals the fact that certain types of material are likely to predominate generally. A program without music is, for example, very unusual. Doubtless the reason for this lies in the belief that music is universally enjoyed, is always appropriate, possesses good educational elements, and fits in well with the other numbers on a program. Perhaps, no less, ability in music is looked upon as an accomplishment well worth displaying. Furthermore, in music a very large group may share in rendering a single number, and there is no danger, as in a play, that one poor performer in the group will spoil the whole thing. Features that are common to many programs, and that to a large degree measure up with the principles just stated, are:

1. Music — vocal and instrumental, groups and soloists
2. Stories, telling and reading
3. Dances and drills
4. Plays and pageants
5. Readings and recitations
6. Demonstrations, exhibits, and pictures
7. Games and stunts

Any one of the foregoing may be used to constitute an entire program, or several of the features listed may be used in a combination event. The combined type of program is far more common, because it offers the audience a wider variety and makes it easier to select features that are within the range of the children's different abilities. The one-activity program probably produces a greater effect if the parts are well chosen, but it means intensified preparatory training. There is little difficulty, as a rule, in putting plenty of variety into a program that is all music or all dramatics. Nevertheless, it is likely that the diversified program will prove, all in all, a more popular type.

Organizing the program. After the program has been sketched out, and as the date for its execution approaches, various organization and planning duties should be taken up. In arranging these the teacher is called upon to display managerial ability fully equal to that required in operating the school under the daily program. She should begin so early that she will not be too much hurried and will be able to make modifications if something unforeseen should happen — as when, for example, one of the pivotal characters has to leave the district, or when pupils who were to have taken part drop out on account of sickness. Perhaps the very possibility of these happenings will help to keep the teacher from undertaking too elaborate a scheme and to limit her to simple features that are well within the ability of many children to carry out. She should make up her

mind just what is needed in the way of preparation, such as leaders, ushers, and especially stage materials, and see that all are provided.

To return to the main steps in planning, the first task of the teacher is to create an interest in the program. She may be able to do this simply by asking the children how they would like to give a program on — say — Thanksgiving Day. Usually the mere suggestion is enough; all are at once ready to begin the enterprise. But if the suggestion by itself does not suffice, she may select pupils of some ability privately and ask them to prepare parts. These parts may be presented before the class as a part of the daily schedule, at the opening period in the morning, at the close of school on Friday afternoons, or at some other suitable time. The teacher may then suggest that these numbers are suitable for a special-day program. One teacher created an interest in her project by describing a special program that she had seen and naming pupils in her own class who might have taken the parts successfully. If clubs have been organized, the idea may well spring from the work of some of them.

The second step in planning is to assign parts and duties. As has been said, the educational values should be distributed as widely as possible. The teacher's aim should not be to choose only those who are star performers. On the contrary, the less able and less proficient pupils should be given an opportunity to take part, just as they would be given a share in the recitations in arithmetic, spelling, and history. If only a few pupils can be included in a given program, the others may share in a later event. There is ordinarily not much trouble, however, in bringing a large and miscellaneous group into at least one number of any program.

Other assignments in connection with the event besides those on the program may be made; it is possible to interest

those pupils who would otherwise be left out by giving them places of responsibility in the preparation of the program and in carrying it out. To illustrate, some pupils may work at the decorations, under a leader; others may usher, if visitors are invited; there may be a stage manager, a property man, a press agent, and other similar positions of responsibility. Many children who do not succeed in stage and platform exercises show real ability in some of these executive parts.

When it comes to the assigning of parts for the program, the choice is usually more or less limited. The first principle to observe is that the character should be suited to the part. It is as unwise to force a part upon a pupil, which the teacher knows, and every one else knows, he cannot take, as it would be to assign a seventh-grade arithmetic lesson to a third-grade pupil. Care should be taken, also, not to make any individual too prominent, either by putting him several times on one program or by featuring him in every entertainment. It sometimes happens that a pupil who can sing, or who can play some instrument fairly well, is so frequently made the outstanding figure in school programs as to arouse the envy and disdain of both his pupils and their parents. Leading ladies, leading men, star parts, and star performers may be all right on the commercial stage, but in public-school programs they are out of place.

Some teachers let the pupils choose their parts and, if there is competition for any part, have the competitors draw lots or else decide among themselves who shall have it. In some cases this works very well. A better way is to have the usual try-outs, the teacher rendering the final decision. By this means a larger number of pupils are given some practice, a wiser choice can often be made, and the children are impressed by the idea that they are being fairly treated. If special programs come quite frequently, and the teacher

sees that every one has taken some part during the year, there will be no more jealousy than results from her calling upon one pupil rather than another in recitation. Envy and competition for "parts" are of course good evidences that the pupils really prize the opportunities offered. In all cases, the teacher should be ready to act promptly if the occasion so demands, and should render independent decisions on disputed matters.

Training the pupils. As soon as the parts have been assigned, regular training should begin. This should cover only a short period. It should be so arranged that school time is utilized. For example, in preparing musical numbers the regular music period should be used; recitations and plays fall properly into reading and literature periods; dances, games, drills, and stunts into the time set aside for physical education. If extra training seems desirable, the unassigned and opening periods will answer. Herein is seen the importance of selecting for programs features from the daily program of teaching. If numbers have been prepared in the regular classes it will not be necessary to take up much time, after school and at intermissions, in drilling the pupils in their parts.

It is not wise to aim at too great perfection. If this is done the practice will come to take more time than the exercises themselves are worth. This might happen in reading or penmanship, or in getting ready for the daily recitation. It is more likely to happen in training for special days, particularly if visitors are allowed to be present. The results of this over-practice are that the teacher exhausts herself and overworks the pupils, daily tasks go neglected, parents complain, and the teacher is criticized. It is not a serious thing for a pupil to make an error in a recitation or song; the error will not detract from the enjoyment of the program, and may even add to it. Too much drill and too much emphasis

upon being letter-perfect will make awkward little automatons of the children, take all the happy spontaneity out of the exercises, and make the pupils heartily dislike the hours of practice.

The training or coaching itself is a real teaching exercise. Therefore, the usual devices employed in teaching the typical school subjects should be employed. The first need is motivation. Here as a rule the teacher is fortunate in finding a strong interest already aroused — the children's eagerness to make a good showing. Following motivation comes the plan of training. As a typical example of this process, let us consider a play. The teacher first tells the pupils briefly what to do, and how to do it, and then gives a demonstration. The pupils now go through the exercises, the teacher correcting and reënforcing action and interpretation wherever it is necessary to do so. When a correct pattern has been set, attentive, enthusiastic practice is all that is needed thereafter. In other cases, it may be well for the teacher to begin the work of training by having the pupils give their own interpretation of the text uninfluenced by directions from any one else. Then she should proceed, as in the first case, to give hints and instructions that will make for improvement, retaining whatever is good in the pupils' efforts. In some instances, the teacher may feel incapable of offering advice. It may be possible then to get help from another teacher, or from some one in the community. Nearly always some such arrangement can be made, and the method offers a very satisfactory way of solving a difficult problem.

Special weeks. The idea of concentrating or making a drive upon special objectives has grown markedly during recent years. From a pedagogical standpoint there is much of value in the idea, provided the objectives are themselves worth while. Often by mobilizing all of the resources of

the school and the community, and attacking a problem with force and intensity, a victory may be gained in a few days that under ordinary methods would require many weeks. Some of the value of the idea lies in bringing the problem into the pupils' consciousness and so revealing the need that it involves. To illustrate — Better-English-Week may fix the ideal of good language in that not only do the pupils learn more English while the drive is on, but the ideal continues to influence them favorably for a long time thereafter. As usually managed, the special weeks do not use time belonging to regular matters. But they do tend to color everything done in the school during the period, and they often stand out in bright relief by the side of the regular routine.

In their general aspects, special weeks are simply compounds of many special occasions. Therefore, practically everything that applies to planning for special days applies also to planning for special weeks. As one looks over typical special-week programs he will see that each day of the week is in fact a special day, but that the daily programs have been unified by having a common objective — Better English, Thrift, Kindness to Animals, etc. Inasmuch as the later results depend to so great a degree upon the spirit of the special week, great effort should be made to have every day's program well planned and carried out with enthusiasm. In fact, the basic idea to be realized is practically identical with James's famous law of habit: "Launch with as decided an initiative as possible." A dull, formal program for a special-week means zero results; in addition, it renders further effort along the same line more difficult.

Special programs. In the pages that follow a few typical special-day and special-week programs are given. These have been selected from a list of programs that have been carried out successfully by teachers in many places. Per-

haps none of them will be wholly adaptable to another school than that for which it was intended, but in some instances the necessary changes will be few in number. The references at the close of the chapter should be read for further discussion and for other illustrations of special programs, and, in addition, the teacher should keep a list of those which she has found valuable.

One of the best things a teacher can do for herself is to assume at the start the right attitude toward the whole question of having special days, events, and weeks. It is well known that some teachers object to them on the grounds that "they interfere with the real work of the school." The real work of the school, however, is to educate boys and girls and to make as large a contribution as possible to their welfare. The question then becomes what is of most worth in realizing this purpose. If the special-day program makes an important contribution, then we should give it a place of importance in the school curriculum and in school life. With these considerations in view, we turn to the special programs mentioned at the beginning of the paragraph:

1. **May Day.** The chief objectives to be realized through a May-Day program are health, enjoyment, and good citizenship. The early history of the day is most fascinating, and preparation for the program may be taken up in English, music, history, or physical education. The events which are appropriate are of such a nature that all children can participate in them. They give delight as spectacles — the color, the activity, the outdoor setting, and the large number of pupils engaged in natural happy enjoyment. In many schools the children are dressed in white, with crêpe sashes of various colors. This should not be a requirement, however, if it involves subjecting any one to burdensome expense. The program which follows was

given in a grove near the school by primary- and intermediate-school children:

1. May pole dance (music, "English May Pole Dance" furnished by phonograph)
2. Pantomime dance with balloons
3. Games (Frog in the Meadows, Looby Loo, Overhead Relay, Red Rover)
4. Folk dance in costume (Irish jig)
5. Games (Corner, Spry, Dodge Ball, Handkerchief Relay, Snatch the Handkerchief)
6. Folk dance in costume (Italian tarantella)
7. Singing games (Jump Jim Crow, Pig in the Parlor)

2. Memorial Day. Probably no occasion offers a better opportunity than Memorial Day to develop such desirable character traits as reverence, loyalty to noble ideals, patriotism, and service and self-sacrifice. As a stimulus to achievement in other fields it also offers unsurpassed opportunity, a point well brought out in the *Oregon Memorial Day Annual*, which says: [1]

> The opportunity to utilize the pupils' everyday reading knowledge in the observance of Memorial Day is boundless. A concise review of a piece of worth-while fiction of the Civil War period, or a carefully prepared reproduction of a Civil War story will give the student a valuable part in the program. Mention is made in the ensuing bibliography of a number of Civil War stories to which grade students eagerly turn. With high-school students Churchill's *The Crisis*, Johnston's *The Long Roll*, and Bacheller's *A Man for the Ages*, have long been favorites. Mature students will enjoy Drinkwater's *Abraham Lincoln*.

The program which follows has been given often, and always with success. If the public is invited, it may be well to plan a procession in which such groups as the Scouts, the Grand Army of the Republic, the American Legion, the Service Corps, and others are to be distinguished. As in all

[1] Page 18, 1925.

community events, it is well to bring the audience into the program by means of group singing, the salute to the flag, responsive reading, or some other exercise. This measure is provided for to some extent in the following program:

1. Procession or invocation
2. Song — America
3. Pageant — Lest We Forget
4. Music
5. Reading — The Bivouac of the Dead, or, Memorial Day
6. Song — Tenting To-night
7. Reading — True Americanism
8. Poem — The Wood Called Rouge-Bouquet, or, In Flanders Fields
9. Song — America the Beautiful, or the Star Spangled Banner
10. Recessional

3. Thanksgiving Day. The celebration of Thanksgiving Day is such a well-established custom and typical programs for the occasion are so well known that there is but little to add here on the subject. It may be said, though, that the purpose of the usual program is to develop such character traits as reverence, respect, appreciation of benefits received, kindliness, and good will. From an educational standpoint, the observance of the day connects well with history, literature, citizenship, art, music, physical education, and geography. Much of the value and significance of the program is missed if the children have not received instruction which makes them understand the origin of the day. In many communities there has grown up the practice of introducing the "home-coming" idea into the Thanksgiving program, an idea that can be developed in many original ways by the school. In some measure, at least, this thought is suggested in the type program which follows:

1. Reading — The Governor's Proclamation
2. Song — *We Thank Thee* (Emerson)
3. Play, story, or reading — *The First Thanksgiving*

4. Reading — Lincoln's Last Thanksgiving Proclamation
5. Song — *Thanksgiving Day* (Edmonds)
6. Reading — *The Boy is Coming Home* (Hill)
7. Song — *National Thanksgiving Hymn* (Soule)
8. Play — *A Merry Thanksgiving* (Nellie Spangler-Mustaine)
9. Song — *Home, Sweet Home,* or, *America*

4. Christmas. Like Thanksgiving, Christmas is well established as an occasion of observance. Dramatics, pageants, story-telling, carols, history, art, and religion are related to the special program; character, citizenship, worthy enjoyment, and skill in fundamentals are objectives. Instead of the usual program we will outline, for the sake of variety, an adaptation of Betzner's "A Merry Christmas Party." [1] It may be given as either a class or a school event, or may be made a community affair. The outstanding points of the entertainment are:

1. Invitations written with red ink on green paper. Each guest is asked to bring a gift — "anything appropriate, from an egg-beater to an automobile, provided it does not cost more than ten cents."
2. Decorations made by the children, but final arrangements postponed until the hour of the party. Each guest is then given a card bearing instructions as to how he can help with finishing the decorating — by making paper chains, stringing popcorn and cranberries, putting up evergreens about the room, or filling bags with candy, nuts, and popcorn.
3. Games, including drawing for gifts. Names of the pupils put into a box, and each pupil drawing one name, which represents the recipient of his special gift mentioned in (1).
4. Decorating the tree. The guests or pupils are divided into two groups, the workers and the critics. The latter, seated around the tree, make constructive suggestions.
5. Christmas pantomime — Good King Wenceslas
6. Christmas Play — St. George and the Dragon
7. Gifts taken from the tree
8. Refreshments

[1] Era Betzner, "A Merry Christmas Party," pp. 510–14.

5. Washington's Birthday. The purpose of observing Washington's Birthday is to quicken American patriotism, to create an interest in history, to give an understanding of early days in America, to stimulate achievement, to build character, and to train pupils in unselfish service and citizenship. The parts may be taken from the regular work in history, civics, music, physical education, and literature. In all birthday celebrations, an effort should be made to shape the program in such a way as to make it show as clearly as possible the character of the hero and the times in which he lived, so that, through familiarity with him the children will be incited to emulate his noble traits. Plays and pageants, historical sketches, and quotations from addresses, letters, and other documents are useful in this respect. Examples of several essential features in birthday programs are given in the following program:

1. Song — Columbia the Gem of the Ocean
2. Washington's rules of courtesy
3. Pageant — Mount Vernon Days
4. Music — Our National Songs
5. Reading — The Flag (Franklin K. Lane)
6. Song — The American (Stahl)
7. Flag Drill
8. Stories of Washington
9. Song — Mount Vernon Bells

6. Music Week. The purpose of Music Week is to motivate school and home instruction in music, extend acquaintance with good music, develop an appreciation of American folk songs, stimulate special talent, and lead to a wider use of music in the home, school, and community. The exercises may be diversified in many ways, as by studying the history of songs, learning appreciation and recognition lessons through the use of the phonograph, chorus singing, a study of musical instruments, and by giving special programs com-

posed of songs of other lands. Music Week affords an unusual opportunity for bringing in the community, and for encouraging organized coöperation within the school. As an illustration of what has been tried in several communities we give the following outline, by days:

1. Sunday — Music and Religion. Sunday program in the churches.
2. Monday — Music in the Home. Home night program.
3. Tuesday — Music in Industry. Community singing.
4. Wednesday — Music in the Schools. Varied programs.
5. Thursday — Music in the Schools. Contests.
6. Friday — Music in the Schools. Recitals.
7. Saturday — School and Community Music. Concerts.

In a program of this type emphasis should be placed upon the pupils' participation, not simply upon their acquiring knowledge of music. The contests, recitals, and concerts which are mentioned will be valuable chiefly in proportion to the number of children who take direct part in them. Although the appreciation lesson in music has its place, it is not possible to create with it the enthusiasm which comes from a few minutes of lively singing with all the group taking part. One writer cites the experience of a director of a large symphony orchestra on this point. He says:

> Some of the members of my audiences have been subscribing to season tickets for twenty years. At the end of twenty years they knew nothing about music. During the war, these same people began to sing and to enjoy singing. They learned more about music by participating in community singing for six months than they did by listening to symphony concerts for twenty years.

A voting contest for the most popular songs will often add distinct zest to music week. Children are certain to enter heartily into such an enterprise. In one school where this was done, the favorites made up the program for the community "sing," and later the list was often drawn upon for

opening exercises. The winners in the favorite-song contest among the pupils were:

America the Beautiful	Carry Me Back to Old Virginia
Old Folks at Home	Home Sweet Home
Old Black Joe	There's a Long, Long Trail
Dixie	Till We Meet Again
America	Annie Laurie
Sweet Adeline	Silent Night
Juanita	Sweet and Low
Swing Low, Sweet Chariot	L'il Liza Jane
Sweet Genevieve	Columbia the Gem of the Ocean
Tenting To-night	America for Me
The Sun Smiles in Beauty	My Old Kentucky Home

7. Better English Week. In one respect Better English Week serves the same objective that Music Week serves — it increases the love for those materials that have entered into the lives of the people. It has decided educational values as well, in that it leads to better speech usage, creates the ideal of correct and effective expression in language, widens the knowledge of sources, and builds up special interests. Comprehensive programs for each day may be arranged somewhat after the plan outlined for Music Week. Thus Monday might be devoted to favorite stories, Tuesday to an English assembly, Wednesday to a dramatization of good-speech values, and Friday to contests in declamation, essay writing, debating, and pronunciation. As an example of what may be done in preparing an original play, we quote from Miss Willett:[1]

In the sixth grade, fifty-two children composed an imitation of a moving picture play. This represented the adventures of an Italian boy who graduated from a school in Italy with high honors. He arrived in America and became a street sweeper instead of a college professor, because he knew no English. After a series of adventures as perilous as those of "Poor Pauline," he discovered

[1] Grace W. Willett, "Original Plays for Better Speech Week," p. 17.

that the by-path leading to the road to fame and usefulness in America is the English language.

The exhibit is one of the best methods of vitalizing Better English Week. The pupils have a large share in making the plans through the publicity committee, art committee, special-features committee, and program committee. Considerable attention is given to advertising the program through the class paper, announcements at opening periods, discussion in the English class, and by other available means, such as posters, letters, and news items. The main "exhibit" features of the week may be as follows:

1. Tag day. On Monday each pupil receives a tag on which is written "I speak good English." If detected in an error of speech he surrenders his tag to his critic and receives another. The one who acquires the most tags is the winner.
2. Slogans, mottoes, and posters are put up on bulletin boards, walls, and blackboards. Such slogans as "Better say: It is he," call attention to the right words to use. Rhymes such as "Beware! Bad English is about; he'll get you if you don't watch out," beget a proper attitude of attention. Posters suggested by such topics as quarantine, swat the fly, Dutch Cleanser, the Ten Commandments, and language errors are evidences of pupil originality. Cartoons and jokes add to the interest in the exhibit.
3. In order to bring the children into contact with sources of information on speech, an exhibit of books and magazines dealing with the topic "Correct English and How to Use It," dictionaries, books of synonyms, and good literature may be displayed in the library, in a corridor, or in a classroom.
4. A fourth valuable feature consists of compositions, letters, envelopes, original verses, and papers and outlines based on other subjects than English.
5. For the final day, a Better English Parade or picnic is suitable. Pageants, plays, language games, and contests may also enliven the last afternoon.

Sources of material. There is a great abundance of material available for Special Day projects. Most of the

State Departments of Education publish handbooks of special-day programs; in these publications typical programs and selections are given. Illinois, Michigan, Connecticut, Oregon, Nebraska, West Virginia, Wisconsin, and New Jersey annually issue manuals containing useful material for one or more special days. A second timely source is the various state teachers' magazines and those educational publications of general circulation such as the *Normal Instructor and Primary Plans*, and *Primary Education*. The Penn Publishing Company, of Philadelphia, puts out a series of six or seven little volumes entitled *Our American Holidays*, under the editorship of Robert H. Schauffler. Community Service, 1 Madison Avenue, New York, offers to help schools arrange Memorial-Day programs, and is also able to supply much other useful material. The Denison Manufacturing Company, Fifth Avenue and Twenty-Sixth Street, New York, has a novelty booklet containing suggestions for Children's Block Parties and Picnics. For more varied programs — those of interest to both community and school — the best sources are *Playground*, and *Drama*. *The English Journal* is the chief reliance at present for Better-English-Week programs. The reader will also find at the close of this chapter additional references on sources.

Summary. Certain principles have been implied in the preceding discussion which merit repetition. Care should always be taken that the programs are not too long. Any dull program is too long; even an interesting program will fail to keep people seated until they become physically tired. Second, judicious praise should be bestowed upon all who participate and help, and no one should be criticized for errors or for inferior performance. The teacher should also take care not to overdo even a good thing; special days serve their best purpose only when the special activities are interspersed with periods of intense and interesting work along

SIXTH-GRADE PUPILS IN DRAMATICS
A scene from "The Thankful Heart"

the lines of the daily program. When special activities are planned with the abilities of the children in mind, and when the materials used possess real value in themselves, the work may be as much worth while as are relatively longer periods of class teaching. Special programs that are well planned and well managed are of large educational importance.

EXERCISES AND PROBLEMS

1. From the School Law of your State make up a list of special days, classifying them as "holidays" and "days of special observance."
2. Point out as many values as you can in special-day programs.
3. Make a list of the chief requirements which a special-day program should satisfy. Does the Washington's Birthday Program, given on page 462, meet these standards for the average village community? How would you modify it for some community with which you are acquainted?
4. State the main steps in planning for a special day. How can the children help in this preliminary work?
5. Suppose you were planning for a Christmas play, how would you choose the actors? Give reasons.
6. What, in your opinion, are the advantages in having numbers for special-day programs taken from regular class activities?
7. Prepare a suggested program for Lincoln's Birthday. With what school subjects are the numbers related? How much time, do you estimate, will be needed for giving your program?
8. Name all the purposes you can think of which would be served by the observance of Thrift Week. With what subjects might the special programs be connected?
9. Is the objection, "special-day activities interfere with the real work of the school," a valid one? Discuss.
10. Make up a list of materials which are available to you in preparing special-day programs. What help can you obtain from your State Department of Education? From your state or local library?

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